

September 20, 2006

Mr. Steve Munro Compliance Project Manager California Energy Commission 1516 9th Street, MS 2000 Sacramento, CA 95814-5512

Subject:

Addendum 1 to Petition for Revisions/Administrative Changes to Air Quality

**Conditions Commission Decision (97-AFC-1C)** 

High Desert Power Project, LLC

Dear Mr. Munro:

High Desert Power Project, LLC ("HDPP") is enclosing the attached information as an addendum to the August 30, 2006 petition for revisions to the Commission Decision (97-AFC-1C) for the HDPP facility.

The Continuous Emissions Monitoring Systems (CEMS) installed on each combustion turbine are the primary method used by HDPP to determine compliance with the emission limits for the facility. All CEMS were certified in accordance with 40 CFR Parts 60 and 75 prior to the start of operations of the facility. In addition, to ensure that the systems are operating within the required accuracy and specifications, HDPP performs numerous QA/QC checks or tests on the system including annual Relative Accuracy Test Audits (RATA), quarterly Cylinder Gas Audits (CGA), quarterly linearity tests, daily calibrations, and daily CEMS inspections. As shown by the summary of results in Attachment 1, all CEMS have passed every RATA performed over the last three years of operation. All other checks performed on the CEMS demonstrate that the systems are operating within specifications.

HDPP believes that the information in this letter and attachment further supports our petition and justifies the approval of the proposed revisions to AQ-16 conditions as outlined in the petition dated August 30, 2006.

Should you have any questions or need additional information regarding this submittal, please contact me at (949) 425-4755.

Sincerely,

Ramiro Garcia

**Environmental Director** 

Constellation Energy - West Region

Jan 1

cc: Mr. Alan De Salvio

Mojave Desert Air Quality Management District

14306 Park Avenue

Victorville, CA 92392-2310

Mr. Gerardo Rios

United States Environmental Protection Agency, Region IX

75 Hawthorne Street

San Francisco, CA 94105

Dave Boward, HDPP

Chris Milner, HDPP

Jon Boyer, Constellation Energy

Facility File: 13.1 (CEC Application)

#### Attachment 1

**RATA Test Summaries** 

## EMISSION TEST REPORT for INITIAL COMPLIANCE TESTS AND CONTINUOUS EMISSION MONITOR CERTIFICATIONS

On THOSE COMBINED CVCI E

THREE COMBINED CYCLE WESTINGHOUSE 501F TURBINES at the

HIGH DESERT POWER PROJECT VICTORVILLE, CALIFORNIA

Volume I
Test Report
Appendix A
Appendix B
Appendix C (partial)

Prepared for Kiewit Industrial

Test Dates March 1-30, 2003 Report Date: May 16, 2003 Cubix Job No. 7328

Prepared by



CORPOR ATE HEADQUARTERS 9225 US Hwy. 183 South, Austin, TX 78747 (512) 243-0202 TEL (512) 243-0222 FAX

#### **SUMMARY OF RESULTS**

Exhaust gases from three combined cycle turbines were tested to determine the compliance status of the unit with regard to the emission limits set forth by CEC, EPA PSD, and MDAQMD permits as well as to complete initial certification of the NOx, CO, NH3, and O2 CEMSs. The testing was conducted on March 1-3, April 1-7, and April 30, 2003 by Cubix Corporation of Cameron Park, California.

The test matrix consisted of Subpart GG testing, compliance testing, startup/shutdown testing, and CEMS certifications.

The Subpart GG testing on each unit began with an initial O2 traverse. The initial O2 traverse consisted of O2 measurements at 48-points in the stack for 2-minutes per point. The eight points which exhibited the lowest O2 concentrations were then utilized throughout twelve 16-minute test runs. During each of these test runs, NOx and O2 concentrations were measured at these eight points for 2-minutes per point. Three test runs were conducted at each of four separate load conditions. The load conditions chosen spanned from minimum load to base load.

Compliance testing consisted of three gaseous and three PM/PM10 test runs. The gaseous test runs were 1-hour long and included instrumental measurements of NOx, CO, O2, and CO2. These measurements were conducted at the same eight traverse points (7.5 minutes per point) as were used during the Subpart GG tests. A 30-minute ammonia train was run throughout each test run and a SUMA canister was filled for subsequent VOC and acrolein analyses throughout each test run. PM/PM10 test runs were 180-minutes in duration. The PM sample train was also utilized for aldehyde analyses. Both turbines and duct burners fired at full load during the compliance tests. Thirty 6-minute opacity observations were conducted on each of the three units while operating under full load.

Testing on Unit 3 was repeated on April 30 after turbine tuning testing was repeated by Siemens-Westinghouse personnel. The re-test consisted of three 1-hour test runs during which NOx and O2 emissions were measured while Unit 3 operated at full load (both turbine and duct burners).

On each unit, instrumental VOC and O2 measurements were conducted throughout one of each of the following events--a cold startup, a warm startup, a hot startup, and a shutdown. Real-time instrumental VOC measurements were conducted through the use of two THC analyzers. One analyzer operated in the normal mode and provided a continuous measurement of THC. The other was equipped with a charcoal filter which removed all hydrocarbons except for

methane. The difference between these two measurements provided for a measurement of VOC emissions.

Per the permit, a startup was defined as lasting from the moment of fuel ignition through achievement of operating permit limits and a shutdown consisted of the time between initial lowering of unit load until fuel flow ended. Hot startups consist of those within less than 8-hours of firing, cold startups include those with the unit off for more than 72-hours, and warm startups are those when the unit has been off between 8 and 72 hours.

CEMS certifications consisted of a relative accuracy test audit (RATA), cycle time tests, linearity tests, and 7-day calibration drift tests. The RATA consisted of a stratification test followed by nine 21-minute test runs. Some of the emission compliance runs were used for the RATA. During each 21-minute test run, NOx, O2, and CO were measurement via instrumental analysis at 3-points within the stack for 7-minutes per point. The stratification test results were used to select those three points by defining the sample port and traverse point locations which provided for the best overall emission average. Cycle time and linearity testing was conducted by Cubix personnel during this project and the results included in this report. The drift test was conducted by Kiewit and Constellation personnel and included in this report. Both duct burners and turbine fired at full load during the RATA. The turbine was combusting fuel and operating at least 50% of base load during the other certification test events.

After completion of the laboratory analyses of the initial RATA samples and re-tuning of Turbine 3, the ammonia RATA was repeated on April 30. Twelve 21-minute ammonia sample trains were conducted during the re-test.

Tables 2-4 provide the results of the initial compliance tests. Each tabular summary provides the pertinent operational parameters, ambient conditions, Cubix measurements, and calculated emission rates during each of the three test runs.

NOx emissions for the three respective units during the original tests averaged 15.9, 15.8, ands 20.1 lbs/hr in comparison to a permit limit of 18.0 lbs/hr for each unit (based on 2.5 ppm @ 15% O2). CO emission averaged 0.70, 0.26, and 1.07 lbs/hr in comparison to a permit limit of 17.53 lbs/hr. VOC emissions averaged 0.87, 1.31, and 2.47 lbs/hr and the permit limit is 2.51 lbs/hr per unit. VOC was measured as heptane and reported in methane equivalents. The three respective PM/PM10 measurements averaged 16.5, 9.15, and 16.43 lbs/hr with a permit limit of 18.14 lbs/hr. SOx emissions from each unit averaged <0.009 lbs/hr (below detectable limit of method) with a permit limit of 1.11 lbs/hr. Ammonia concentrations corrected to 15% O2 averaged 5.38, 6.54, and 0.95 ppmvd for the three respective units in comparison to a permit limit of 10 ppm @ 15% O2.

During the re-test of Unit 3, NOx emissions averaged 6.18 lbs/hr. and 2.41 ppmvd @ 15% O2. The results of the re-test for Unit 3 NOx is summarized in Table 4a.

Visible emissions were 0% during all opacity observations.

Aldehyde and acrolein measurements were required by the permit although no emission limit was imposed. Aldehydes averaged 0.28, 0.39, and 0.45 lbs/day (reported as formaldehyde) for the three units. Acrolein concentrations were below the minimum detection limit of the method and based that limit were less than 2.99, 3.00, and 3.46 lbs/day for the three units.

All gaseous emission rates (i.e. NOx, CO, aldehydes, VOC, SOx) are calculated based on the Method 19 (stoichiometric) calculation of stack flow rate. PM/PM10 emission rates are calculated based on the physical flow rate measurements obtained via the isokinetic sample train.

NOx, CO, and VOC emissions are also reported in terms of lbs/MMBTU and PM/PM10 in terms of mg/m3 @ 15% O2 as stipulated by the permit. Additionally, the VOC to CO surrogate relationship (i.e. to allow the CO CEMS to be utilized as an indirect measurement of VOC emissions) averaged 1.27 for Unit 1, 9.79 for Unit 2, and 2.45 for Unit 3.

The NOx measurements required by Subpart GG (turbine only operations) are summarized in Tables 5-7 for Units 1, 2, and 3, respectively. NOx concentrations corrected to 15% O2 were less than 5 ppmvd at all load conditions for all three units in comparison to a Subpart GG emission limit of 75 ppm @ 15% O2.

The startup and shutdown test results are summarized in Tables 8-10 for Units 1, 2, and 3, respectively. Average concentrations of NOx, CO, O2, and VOC and the average fuel rate are provided for each event. The length of each event is also provided. The O2 concentration and fuel rate were utilized to calculate an average stack flow rate and the total time of the event used to calculate the total mass of emissions during the event for comparison with the applicable permit limits.

The permit stipulates that VOC emissions be characterized during each of the four transient events. For Units 1, 2, and 3, respectively, hot startup VOC emissions were 194.1 lbs, 137.3 lbs, and 32.5 lbs. During warm startup, the VOC emissions were 113.5 lbs, 130.6 lbs, and 195.7 lbs. Cold startup VOC emissions were 409.3 lbs, 332 lbs, and 57.5 lbs. The VOC during the three respective shutdown were 88.8 lbs, 232.7 lbs, and 19.5 lbs. The permit does not stipulate a VOC emission limit during startups or shutdowns.

The CEMS are subject to the requirements of both Part 60 and Part 75 and RATA results are provided based on both.

Tables 11-13 provide the RATA results based on Part 75 requirements for Units 1, 2, and 3, respectively. For units with NOx emissions less than 0.20 lbs/MMBTU (as is the case for all three units), the requirement is that the absolute average difference between reference method (RM) and CEMS be less than 0.02 lbs/MMBTU. And, if the differences are also less than 0.015 lbs/MMBTU, future RATAs can be conducted annually rather than semi-annually. The absolute differences were 0.001, 0.000, and 0.003 for the three respective units. All results are rounded to three decimal places as is required by Part 75.

The O2 CEMS relative accuracy's were 0.38%, 0.87%, and 1.30% with average absolute difference of 0.02, 0.09, and 0.13 vol%. Part 75 requirements are that the O2 CEMS have an RA of less than 10% or that the absolute difference be less than 1.0 vol%. Annual RATAs are allowed if the RA is less than 7.5%. Part 60 stipulates that the O2 CEMS have a RA of less than 20% of the RM or that the absolute difference be less than 1.0 vol%, whichever is greater. 20% of the RM is greater than 1.0 vol% and the former requirement applies to all three units.

The bias adjustment factor will be required Unit 3. The BAF for Unit 3 is the 1.111.

Tables 14-16 provide the results of the Part 60 NOx CEMS RATAs. The RA of the RM was 18.17% for Unit 1, 7.31% for Unit 2, and 19.18% for Unit 3. The RAs of the two applicable standards (i.e. permit limits of 2.5 ppmvd @ 15% O2 and 18 lbs/hr) are also provided. Performance Specification 2 stipulates that the RA be less than either 20% of the RM or 10% of the applicable standard, whichever is greater. For these units, 20% of the RM is greater than 10% of either applicable standard and the former requirement applies.

Determination of the applicable standards in terms of ppm was accomplished based on the stack conditions during the test. For example, for the stack conditions during the tests on Unit 1 (i.e. flow rate and diluent concentration), 3.21 ppm would result in a corrected concentration of 2.5 ppm @ 15% O2 and 3.51 ppm would result in an emission rate of 18.0 lbs/hr.

Tables 17-19 provide the CO CEMS RATA results in the same manner as presented for NOx—based on ppm @ 15% O2 and lbs/hr. Performance Specification 4a requires an RA of less than 10% of the RM or an absolute difference of less than 5 ppm, whichever is greater. For these units, 5.0 ppm is greater than 10% of the RM and the requirement is that the difference be less than 5.0 ppm. Table 5 shows that the average absolute differences were 0.37 ppm for Unit 1, 0.38 for Unit 2, and 0.56 for Unit 3.

The July, 2002 monitoring plan indicates that Performance Specifications 4a will be applied to the NH3 CEMS. Tables 20-22 provide the results of the initial NH3 CEMS RATAs. The average absolute differences were 4.92 ppm for Unit 1, 4.41 ppm for Unit 2, and 8.96 for Unit 3.

Table 22a summarizes the results of the second NH3 RATA conducted on Unit 3. During the re-test, the average absolute difference was 0.41 ppmvd.

Cycle time tests are summarized in Tables 23-25. The cycle times were 240, 180, and 180 seconds for the three units which meets the minimum requirements of Part 75 (15-minutes). The O2 and high range NOx CEMS linearity tests (summarized in Tables 26-28 showed compliance with the 5% and 0.5 vol% difference requirement of Part 75.

The 7-day calibration drift tests required by Part 60 (NOx, CO, and CO CEMS) as well as the 7-day calibration error tests required by Part 75 (NOx and O2) are summarized in Tables 29 and 30 for Unit 1, 31 and 32 for Unit 2, 33 and 34 for Unit 3. These tests were conducted by plant personnel on behalf of Forney Corporation, and the data provided to Cubix for inclusion in this report.

Appendix A contains the field data sheets used for the data collection during these tests. Examples of any calculation used to present the results of this section are contained in Appendix B. Results of the fuel analyses and the operational data provided by Kiewit and Constellation personnel is contained in Appendix C. Appendix F includes copies of the strip chart recordings and data logger records used to determine the emission concentrations. Appendix G provides the results of third party laboratory analyses (i.e. ROG measurements). Appendix H contains the opacity observation data sheets.

Table 11:

# Summary of Results - 40CFR75 RATA Results

Keiwit High Desert Technician(s): Source: Plant:

LF/CM/JJ/NS/JW/JC

Number of Tests:

t- value (0.025):

9 2.306

EPA Method 7e, 3a (Method 6c Corrected) Cubix Reference Methods:

Test Run Number	1-RA-1		1-RA-2 1-RA-3	1-RA-4	1-RA-5	1-RA-4 1-RA-5 1-RA-6 1-RA-7 1-RA-8 1-RA-9	1-RA-7	1-RA-8	1-RA-9				
Date	4/5/03	4/5/03	4/5/03	4/5/03	4/5/03	4/5/03	4/5/03	4/6/03	4/6/03				
Start Time (24hr)	16:16	16:48	17:19	17:54	18:25	18:52	19:19	12:13	12:42		Standard	Confidence	Relative
End Time (24 hr)	16:37	17:09	17:40	18:15	18:46	18:46	19:40	12:34	13:03	Average	Deviation	Coefficient	Accuracy
Unit Load (MW)	161	161	161	162	162	163	163	161	161				
Run Status (used or discarded)	nsed	nseq	nsed	nseq	pesn	pesn	nsed	nsed	pesn	- %			
Mey then		で、 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	- 一	<b>高速光光</b>					· · · · · · · · · · · · · · · · · · ·				
Cubix RM NOx (ppmv)	2.840	2.890	2.860	2.880	2.910	2.920	2.920	4.040	4.070	3.148	0.515		
(CEMS NOx (ppmv)	3.300	3.400	3.400	3.400	3.300	3.400	3.400	3.100	3.100	3.311	0.127		
Difference (ppmv)	-0.460	-0.510	-0.540	-0.520	-0.390	-0.480	-0.480	0.940	0.970	-0.163	0.636	0.488	
(4) (2)	大田の大学の大学の一年の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の	Antiber September	A CONTRACTOR OF THE PARTY OF	Control State	· · · · · · · · · · · · · · · · · · ·						Participan		
Cubix RM O2 (%, dry)	13.380	13.340	13.390	13.370	13.320	13.290	13.280	13.260	13.270	13.322	0.050		
CEMS O2 (%, dry)	13.300	13,300	13.300	13.300	13.300	13.300	13.300	13.300	13.300	13.300	0.000		
Difference (%, dry)	0.080	0.040	0.000	0.070	0.020	-0.010	-0.020	-0.040	-0.030	0.022	0.050	0.038	
Mexagine exercises as a second	100	The state of the s		Section : Sections	A SAME OF			英語である。		A CONTRACTOR	427 S. C. C. C. C.		
Cubix RM NOx Diluent (Ib/MMBtu	0.00	0.008	0.008	0.008	0.008	0.008	0.008	0.011	0.012	0.009	0.002	With the second second	
CEMS NOx Difuent (Ib/MMBtu)	0.009	0.01	0.01	0.01	0.009	0.01	0.0	0.00	0.009	0.010	0.001		25.69%
Difference (lb/MMBtu)	-0.001	-0.002	-0.002	-0.002	-0.001	-0.002	-0.002	0.002	0.003	-0.001	0.002	0.001	0.0008 lb/MMBtu
*RATA Result (Pass or Fail)													PASS

	Mean	Contidence	Pass of	Pass of Blas Adjustment	
	Difference	Coefficient	Fail	Factor (BAF)	
The state of the s				The State of	
TEXAS, TEXAS AND AND AND MAINTENAN COMP.	101				
NOx-Diluent	-0.001	0.0015	Pass	1.000	

## \*Part 75 RATA Acceptance Criteria:

NOx Mass (Ib/MMBtu): <= 7.5% Relative Accuracy or if CEMS is < 0.200 lb/MMBtu average, difference from RM calculated rate not to exceed +/- 0.015 lb/MMBtu (App. B, Section 2.3.1.2 (f).

## "Part 75 Bias Test and Adjustment Factor (Section 7.6)

If the mean difference is less than or equal to the absolute value of the confidence coefficient, the system passes the bias test. If not, a Bias Adjustment Factor (BAF) must be calculated and applied to the raw CEMS data. As per 40CFR75, Appendix A, 7.6.4 and 7.6.5.

## Table 12:

# Summary of Results - 40CFR75 RATA Results

Number of Tests:

LF/CM/JJ/NS/JW/JC Keiwit High Desert Technician(s): Source: · Plant:

**Cubix Reference Methods:** 

9 2.306 t- value (0.025): EPA Method 7e, 3a (Method 6c Corrected)

Test Run Number	2-RA-1	2-RA-1 2-RA-2 2-RA-3	2-RA-3	2-RA-4	2-RA-5	2-RA-6	2-RA-7	2-RA-5 2-RA-6 2-RA-7 2-RA-8 2-RA-9	2-RA-9				
Date	4/7/03	4/7/03	4/7/03	4/7/03	4/7/03	4/7/03	4/7/03	4/7/03	4/7/03				
Start Time (24hr)	13:57	14:28	15:02	15:30	15:58	16:29	16:58	17:26	17:59		Standard	Confidence	Relative
End Time (24 hr)	14:18	14:49	15:23	15:51	16:19	16:50	17:19	17:47	18:20	Average	Deviation	Coefficient	Accuracy
Unit Load (MW)	159	159	158	158	158	158	158	158	158				
Run Status (used or discarded)	pesn	nsed	nseq	nsed	nseq	pesn	nseq	pesn	nsed				
Mey and	45.00	The state of the s	and the State of the	Mark Street									
VOx (ppmv)	3,160	3.140	3.260	3.350	3.320	3.270	3.270	3.360	3.150	3.253	0.085		
CEMS NOx (ppmv)	3.100	3.100	3.100	3.100	3.100	3.100	3.100	3.100	2.900	3.078	0.067		-
Difference (ppmv)	090.0	0.040	0.160	0.250	0.220	0.170	0.170	0.260	0.250	0.176	0.081	0.062	
		Chambridge Mch	* 0.748 % % &	では、									
	13,380	13,440	13.420	13.410	13.380	13.360	13.380	13.420	13.440	13.403	0.029		
CEMS O2 (%, dry)	13.300	13.400	13,300	13,300	13.300	13,300	13,300	13.300	13.300	13.311	0.033		
Difference (%, dry)	0.080	0.040	0.120	0.110	0.080	0.060	0.080	0.120	0.140	0.092	0.032	0.025	
Mexicologous Systemics view	Section	A ST CO COLOR OF THE	the State of the S	See See See See					不安 一				
Cubix RM NOx Diluent (lb/MMBtu)	0.009	0.00	0.009	0.010	0.010	0.003	0.009	0.010	0.009	0.009	0.001		
CEMS NOx Difuent (Ib/MMBtu)	600.0	0.010	0.010	0.010	0.009	0.010	0.010	0.00	600.0	0.010	0.001		9.24%
Difference (Ib/MMBtu)	0.000	-0.001	-0.001	0.000	0.001	-0.001	-0.001	0.001	0.000	0.000	0.001	0.001	0.0002 lb/MMBtu
*RATA Result (Pass or Fail)													PASS

	Mean Difference	Confidence Coefficient	Pass or Fail	Bias Adjustment Factor (BAF)
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NOx-Diluent	0.000	90000	Pass	1.000

## \*Part 75 RATA Acceptance Criteria:

NOx Mass (Ib/MMBtu): <= 7.5% Relative Accuracy or if CEMS is < 0.200 lb/MMBtu average, difference from RM calculated rate not to exceed +1-0.015 lb/MMBtu (App. B, Section 2.3.1.2 (f). "Part 75 Blas Test and Adjustment Factor (Section 7.6)

If the mean difference is less than or equal to the absolute value of the confidence coefficient, the system passes the bias test. If not, a Bias Adjustment Factor (BAF) must be calculated and applied to the raw CEMS data. As per 40CFR75, Appendix A, 7.6.4 and 7.6.5.

Testing by Cubix Corporation, Austin, Texas

## Table 13:

# Summary of Results - 40CFR75 RATA Results

Keiwit High Desert **Cubix Reference Methods:** Technician(s): Source: Plant:

LF/CM/JJ/NS/JW/JC

Number of Tests: t- value (0.025):

9 2.306

EPA Method 7e, 3a (Method 6c Corrected)

Test Run Number	3-RA-1	3-RA-2 3-RA-3	3-RA-3	3-RA-4	3-RA-5	3-RA-4 3-RA-5 3-RA-6 3-RA-7 3-RA-8 3-RA-9	3-RA-7	3-RA-8	3-RA-9				
Date	4/5/03	4/6/03	4/6/03	4/6/03	4/6/03	4/6/03	4/6/03	4/6/03	4/6/03				
Start Time (24hr)	16:59	8:45	9:38	10:20	49:11	11:40	12:17	14:39	15:24	-	Standard	Standard   Confidence	Relative
End Time (24 hr)	17:20	90:6	9:59	10:41	11:25	12:01	12:38	15:00	15:45	Average	Deviation	Coefficient	Accuracy
Unit Load (MW)	<del>1</del>	165	<u>\$</u>	161	161	160	160	158	157				
Run Status (used or discarded)	pesn	nseq	nsed	nsed	nseq	nseq	nsed	nsed	nsed				
(20) (20)		100000	A. A. S.		470 H 4 C V	A CONTRACTOR OF THE PARTY OF TH	A 2010 C	A. Carrier		本には、関係は			
Cubix RM NOx (ppmv)	3.670	3.770	3.750	3.390	3.730	4.250	4.720	4.120	3.610	3.890	0.404		
CEMS NOx (ppmv)	3.100	3.100	3.100	2.800	3.000	2.900	3.000	3.300	3.000	3.033	0.141		
Difference (ppmv)	0.570	0.670	0.650	0.590	0.730	1.350	1.720	0.820	0.610	0.857	0.403	0.310	
	Poster Section			A M. Separa John	Sec. Sec. Sec.								
1 O2 (%, dry)	13.340	13.280	13.420		13.520	13.420	13.450	13.450	13.430	13.416	0.069		
CEMS O2 (%, dry)	13.200	13.300	13.300	13.300	13.300	13.300	13.300	13.300	13,300	13,289	0.033		
Difference (%, dry)	0.140	-0.020	0.120	0.130	0.220	0.120	0.150	0.150	0.130	0.127	0.063	0.048	
Mely They System soll a		( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	September 1	ASSESSMENT OF STREET	A Section Contracts	The second	父母を						
Cubix RM NOx Diluent (Ib/MMBtu	0.011	0.011	0.011	0.010	0.011	0.012	0.014	0.012	0.011	0.011	0.001		
CEMS NOx Diluent (lb/MMBtu)	0.009	0,009	0.009	0.008	0.009	0.008	0.009	0.00	0.009	0.009	0.000		30.81%
Difference (Ib/MMBtu)	0.002	0.002	0.002	0.002	0.002	0.004	0.005	0.003	0.002	0.003	0.001	0.001	0.0027 lb/MMBtu
*RATA Result (Pass or Fall)													PASS

	Mean	Confidence	Pass or	Pass or Bias Adjustment
	Difference	Coefficient	Fai	Factor (BAF)
			The second second	designation of the second second
ment of the state	Ī			
NOx-Diluent	0.003	0.0009	Fail	1.11

# NOx Mass (Ib/MMBtu): <= 7.5% Relative Accuracy or if CEMS is < 0.200 lb/MMBtu average, difference from RM calculated rate not to exceed +/- 0.015 lb/MMBtu (App. B, Section 2.3.1.2 (f). \*Part 75 RATA Acceptance Criteria:

# "Part 75 Bias Test and Adjustment Factor (Section 7.6)

If the mean difference is less than or equal to the absolute value of the confidence coefficient, the system passes the bias test. If not, a Bias Adjustment Factor (BAF) must be calculated and applied to the raw CEMS data. As per 40CFR75, Appendix A, 7.6.4 and 7.6.5.

## TABLE 14 UNIT 1 NOx PART 60 CEMS RATA

Date: Plant:	4/5-6/03 Kiewit High Desert	sert		Applicable Standards:		3.21 ppm 3.51 ppm	for ppm @ 15% 02 limit for lbs/hr limit	#
Source: Techniclan(s): Cubix Method:		LF/CM/JJ/NS/JW/JC EPA Method 7e	S/JW/JC	Number of Tests: t• value (97.5% confidence)	(idence)		2.306	
			2	CEMS Data		Intermediate Values	58	
Test	Start	Stop	Cubix NOx	CEMNOX	Difference	RA of	RA of	
Run No.	Time	Time	(hb wudd)	(ppmv, dry)	(ppmv abs)	- PM	app std 1	ļ
1-RA-1	16:16	16:37	2.84	3.30	0.46	16.20%	13.11%	
1-RA-2	16;48	17:09	2.89	3.40	0.51	28.02%	22.88%	
1-RA-3	17:19	17:40	2.86	3.40	0.54	21.09%	17.21%	
1-RA-4	17:54	18:15	2.88	3.40	0.52	19.59%	16.01%	
1-RA-5	18:25	18:46	2.91	3.30	0.39	19.43%	15.93%	
1-RA-6	18:52	18:46	2.92	3.40	0.48	18.73%	15.39%	
1-RA-7	19:19	19:40	2.92	3.40	0.48	18.29%	15.06%	
1-C-1	11:03	12:03	2.87	3.30	0.43	17.93%	14.75%	•
1-C-3	14:45	15:45	3.02	3.20	0.18	18.17%	15.03%	
		Averages	2.90	3.34	0.4433			
	Stand	Standard Deviation	0.05	0.07	0.1090			
				Confidence Interval	0.08			
	Relat	tive Accuracy (i	based on mean	Relative Accuracy (based on mean of reference method)	18.17%	Į		
Rel	lative Accuracy	(based on appli	icable standard	Relative Accuracy (based on applicable standard-ppm @ 15% 02 llmit)	16.42%		COMPLIANCE	
	Relative	Accuracy (base	ed on applicable	Relative Accuracy (based on applicable standard-lbs/hr limit)	15.03%		STANDARDS	
	EPA Standan	d: RA must be	3 < 20% of mean	EPA Standard: RA must be < 20% of mean of reference method		ppm @ 02 ilmit	<20% of RM	
		or RA must	1ust be < 10% o	be < 10% of applicable standard,		lbs/hr limit	<20% of RM	
				whichever is greater				
nese runs not u	These runs not used for RA calculation	nation						
1-RA-8	12:13	12:34	4.03	3.10	-0.93		•	
1-RA-9	12:42	13:03	4.02	3.10	-0.92			
•	*****	10.44	**	400	,			

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## TABLE 15 UNIT 2 NOx PART 60 CEMS RATA

Unit 2  LF/CM/JJ/NS/JW/JC Number of Tests: EPA Method 7e  t- value (97.5% confidence of Tests:  EPA Method 7e  t- value (97.5% confidence of Tests:  EPA Method 7e  t- value (97.5% confidence of Tests:  EPA Method 7e  t- value (97.5% confidence of Tests:  Time Start Stop Cubix NOx CEMNOx Directory of Start (ppmv dry) (ppmv, dry) (ppmv, dry)  13:57 14:18 3.16 3.10 3.10  15:02 15:23 3.26 3.10  15:58 16:19 3.32 3.10  16:29 16:50 3.27 3.10	<b>S C</b>	2.306
Start Stop Cubix NOx CEMS Data  Start Stop Cubix NOx CEMNOx Time Time (ppmv dry) (ppmv, dry) 13:57 14:18 3.16 3.10 15:02 15:23 3.26 3.10 15:56 16:19 3.32 3.10		
Start         Stop         Cubix NOx         CEMNOx           Time         Time         (ppmv dry)         (ppmv, dry)           13:57         14:18         3.16         3.10           14:2B         14:49         3.14         3.10           15:02         15:23         3.26         3.10           15:30         15:51         3.35         3.10           15:5B         16:19         3.32         3.10           16:29         16:50         3.27         3.10	<u> </u>	lues
Time Time (ppmv dry) (ppmv, dry) 13:57 14:18 3.16 3.10 14:28 14:49 3.14 3.10 15:02 15:23 3.26 3.10 15:30 15:51 3.35 3.10 15:58 16:19 3.32 3.10		
13:57     14:18     3.16       14:28     14:49     3.14     3.10       15:02     15:23     3.26     3.10       15:30     15:51     3.35     3.10       15:58     16:19     3.32     3.10       16:29     16:50     3.27     3.10	v abs)	app std 1
14:28     14:49     3.14     3.10       15:02     15:23     3.26     3.10       15:30     15:51     3.35     3.10       15:58     16:19     3.32     3.10       16:29     16:50     3.27     3.10	1.06 1.90%	1.67%
15:02     15:23     3.26     3.10       15:30     15:51     3.35     3.10       15:58     16:19     3.32     3.10       16:29     16:50     3.27     3.10	5.62%	4.93%
15:30     15:51     3.35     3.10       15:58     16:19     3.32     3.10       16:29     16:50     3.27     3.10	7.73%	6.86%
15:58 16:19 3.32 3.10 16:29 16:50 3.27 3.10	1.25 8.74%	7.85%
16:29 16:50 3.27 3.10		7.30%
	7.34%	6.64%
2-RA-7 16:58 17:19 3.27 3.10 -0.17	,	6.25%
2-RA-8 17:26 17:47 3.36 3.10 -0.26	7.16%	6.51%
2.90	7.31%	6,61%

Testing by Cubix Corporation, Cameron Park, California

whichever is greater

## TABLE 16 UNIT 3 NOx PART 60 CEMS RATA

Plant:	Kiewit High Desert	sert			i	3.46 ppm	for ibs/hr limit
source: Technician(s): Cubix Method:		LF/CM/JJ/NS/JW/J EPA Method 7e	IS/JW/JC 17e	Number of Tests: t- value (97.5% confidence)	rlidence)		2.306
			<b>3</b>	CEMS Data		Intermediate Values	nes
Test	Start	Stop	Cubix NOx	CEMNOX	Difference	RA of	BA of
Run No.	Time	Time	(ppmv dry)	(ppmv, dry)	(pprnv abs)	FM	app std 1
3-RA-1	16:59	17:20	3.67	3.10	-0.57	15.53%	16.45%
3-RA-2	08:45	90:60	3.77	3.10	-0.67	33.74%	36.24%
3-RA-3	09:38	09:59	3.75	3.10	-0.65	20.41%	21.98%
3-RA-4	10:20	10:41	3.39	2.80	-0,59	19.09%	20.08%
3-RA-5	11:04	11:25	3.73	3.00	-0.73	19.71%	20.83%
3-C-2	12:26	13:26	3.62	3.10	-0.52	19.19%	20.25%
3-0-3	13:36	14:36	3.51	3.00	-0.51	18.73%	19.65%
3-RA-8	14:39	15:00	4.12	3.30	-0.82	19.53%	20.83%
3-RA-9	15:24	15:45	3.61	3.00	-0.61	19.18%	20.41%

Averages	3.69	3.06	0.6300		
Standard Devlation	0.20	0.13	0.1001		
		Confidence Interval	0.08		
Relative Accuracy (based on mean of reference method)	sed on mean	of reference method)	19.18%		
Relative Accuracy (based on applicable standard-ppm @ 15% 02 limit)	able standard	-ppm @ 15% 02 limit)	22.29%		COMPLIANC
Relative Accuracy (based on applicable standard-lbs/hr llmit)	on applicable	standard-lbs/hr limit)	20.41%		STANDARD
EPA Standard: RA must be <	c 20% of mean	must be < 20% of mean of reference method		ppm @ O2 limit	<20% of RI
or RA mu	st be < 10% o	RA must be < 10% of applicable standard,		Ibs/hr Ilmit	<20% of RM
		whichever is greater	•		

Testing by Cubix Corporation, Cameron Park, California

### TABLE 17 UNIT 1 CO PART 60 CEMS RATA

Date: Piant:	4/5-6/03 Kiewit High Desert	sert		Applicable Standards:	*	5.14 ppm 5.61 ppm	for ppm @ 15% O2 limit for lbs/hr limit
Source: Technician(s): Cubix Method:	Coit 1	LF/CM/JJ/NS/JW/JC EPA Method 10	4S/JW/JC d 10	Number of Tests: t- value (97.5% confidence)	ifidence)		2,306
			Æ	CEMS Data	,	intermediate Values	Ues
Test	Start	Stop	Cubix CO	CBMCO	Difference	RA of	RA of
Run No.	Time	Time	(ppmv dry)	(ppmv, dry)	(squ vmdd)	FW	app std 1
1-RA-1	16:16	16:37	0.26	-0.20	-0.46	176.92%	8.20%
1-RA-2	16:48	17:09	0,21	-0.20	-0.41	320.28%	13.41%
1-RA-3	17:19	17:40	0.18	-0.20	-0.38	238.65%	9.21%
1-RA-4	17:54	18:15	0.28	-0.20	-0.48	217.32%	8.00%
1-RA-5	18:25	18:46	0.18	-0.20	-0.38	215.84%	8.54%
1-RA-6	18:52	18:46	0.20	-0.20	-0.40	211.87%	8.24%
1-HA-7	19:19	19:40	0.14	-0.20	-0.34	218.23%	8.05%
1-RA-8	12:13	12:34	0.01	-0.20	-0.21	247.59%	8.05%
1-RA-9	12:42	13:03	0.05	-0.20	-0.25	260.10%	7.77%

							that 60 00 that
0.0893	20.0	260,10%	8.49%	7.77%			
0.00	Confidence Interval	of reference method)	-ppm @ 15% 02 limit)	standard-lbs/hr limit)	or withn 5 ppmv-PS4a	whichever is greater	
60.0		sed on mean	able standard	on applicable	<10% of RM		
Standard Deviation		Relative Accuracy (ba	Relative Accuracy (based on applic	Relative Accuracy (based	EPA Standard: RA must be		
	0.09 60.0	0.09 0.00 Confidence Interval	0.09 0.00  Confidence Interval (based on mean of reference method)				

COMPLIANCE STANDARD-PS48 <5 Ppm diff

Testing by Cubix Corporation, Cameron Park, California

## TABLE 18 UNIT 2 CO PART 60 CEMS RATA

Date: Plant: Source:	4/5-6/03 Kiewit High Desert Unit 2	sert		Applicable Standards;	ió	5.75 ppm	for Ibs/hr ilmit
Fechnician(s): Cubix Method:		LF/CM/JJ/NS/JW/JC EPA Method 10	4S/JW/JC d 10	Number of Tests: t- value (97.5% confidence)	ifidence)		9.2.306
			<b></b>	CEMS Data		Intermediate Values	Values
Test	Start	Stop	Cripix CO	OEM30	Difference	RA of	RA of
Run No.	Time	Time	(App Amdd)	(ppmv, dry)	(sqe vmdd)	T.	app std 1
2-RA-1	13:57	14:18	0.30	-0.20	-0.50	166.67%	8.69%
2-RA-2	14:28	14:49	0.14	-0.20	-0.34	652.95%	24.98%
2-RA-3	15:02	15:23	0.03	-0.20	-0.23	442.96%	12.07%
2-RA-4	15:30	15:51	0.17	-0.20	-0.37	335.43%	9.33%
2-RA-5	15:58	16:19	0.20	-0.20	-0.40	291.34%	8,51%
2-RA-6	16:29	16:50	0.22	-0.20	-0.42	266.70%	8.19%
2-RA-7	16:58	17:19	0.18	-0.20	-0.38	255.82%	7.88%
2-RA-8	17:26	17:47	0.23	-0.20	-0.43	244.50%	7.81%
2-RA-9	17:59	18:20	0.12	-0.20	-0.32	246.41%	7.57%

								nit
								nom @ 02 limit
0.3767	0.0763	90.0	246.41%	8.57%	7.57%			
-0.20	0.00	Confidence Interval	Relative Accuracy (based on mean of reference method)	ard-ppm @ 15% O2 Ilmit)	ble standard-lbs/hr limit)	M or withn 5 ppmv-PS4a	whichever is greater	
0.18	0.08		sed on me	ble stand	on applica	<10% of F		
Averages	Standard Devlation		Relative Accuracy (bas	Relative Accuracy (based on applicable standard-ppm @ 15% 02 limit)	Relative Accuracy (based on applicable standard-lbs/hr limit)	EPA Standard: RA must be <10% of RM or withn 5 ppmv-PS4a		

COMPLIANCE STANDARD-PS4a <5 ppm diff

Testing by Cubix Corporation, Cameron Park, California

### TABLE 19 UNIT 3 CO PART 60 CEMS RATA

Date:	4/5-6/03			Applicable Standards:		5.07 ppm	for ppm @ 15% O2 limit	٠
Plant: Source:	Kiewit High Desert	Sert				5.54 ppm	tor ibs/hr limit	_
Technician(s): Cubix Method:	)   	LF/CM/JJ/NS/J/ EPA Method 10	S/JW/JC 10	Number of Tests: t- value (97.5% confidence)	dence)	النا	2,306	
		L	æ	CEMS Data		Intermediate Values	les	_
Test	Start	Stop	Cubix CO	CEMCO	Difference	RA of	FIA of	
Run No.	Time	Time	(Ap Awdd)	(ppmv, dry)	(ppmv abs)	FM	app std 1	
3-RA-1	16:59	17:20	0.28	-0.20	-0.48	171.43%	8.66%	
3-RA-2	08:45	90:60	0.32	-0.20	-0.52	251.37%	13.60%	
3-RA-3	09:38	09:59	0.32	-0.20	-0.52	183.93%	10.17%	_
3-RA-4	10:20	10:41	0.33	-0.20	-0.53	175.29%	9.88%	
3-RA-5	11:04	11:25	0.29	-0.20	-0.49	173.67%	9.65%	
3-RA-6	11:40	12:01	0.38	-0.20	-0.58	174.05%	10.05%	
3-RA-7	12:17	12:38	0.41	-0.20	-0.61	173.09%	10.39%	
3-RA-8	14:39	15:00	0.45	-0.20	-0.65	171.98%	10.78%	
3-RA-9	15:24	15:45	0,42	-0.20	-0.62	169.45%	10.87%	
		Averages	0.36	-0.20	0.5556			
	Standa	Standard Devlation	90.0	0.00	0.0611			
				Confidence Interval	0.05			
	Relath	ve Accuracy (b	sased on mean	Relative Accuracy (based on mean of reference method)	169.45%			
Re	lative Accuracy (i	based on appli	cable standard	Relative Accuracy (based on applicable standard-ppm @ 15% O2 Ilmit)	11.87%			
	Relative A	couracy (based	d on applicable	Relative Accuracy (based on applicable standard-lbs/hr limit)	10.87%			
	EPA Standa	rd: RA must b	e <10% of RM o	EPA Standard: RA must be <10% of RM or withn 5 ppmv-PS4a		-	COMPLIANCE	
				whichever is greater			STANDARD-PS4a	_
						ppm @ 02 ilmit	<5 ppm diff	~

Testing by Cubix Corporation, Cameron Park, California

## TABLE 20 UNIT 1 NH3 CEMS RELATIVE ACCURACY

1181	Visuit High Dag	to		Applicable Standards.	,	16.07 PM	TOT PULL & 13% OZ MINI
Source:	Unit 1			;			
Technician(s); Cubix Method:		LF/CM/JJ/NS/JW/JC Bay Area ST-1B	3/JW/JC 1B	Number of Tests: t- value (97.5% confidence)	(dence)		2.306
		,	Æ	CEMS Data		Intermediate Values	Values
Test	Start	Stop	Cubix NH3	CEMS NH3	Difference	RA of	RA of
Aun No.	Time	Time	(ppmv dry)	(ppmv, dry)	(ppmv abs)	æ	applica ble standard
1-RA-1	16:16	16:37	10.76	15.20	4.44	41.33%	34.61%
1-5-1	11:09	11:39	7.10	6.95	-0.15	351.02%	243.99%
1-RA-3	17:19	17:40	4.72	15.50	10.78	247.85%	145.24%
1-C-3	14:50	15:20	7.38	8.53	1.15	157.82%	92.03%
1-RA-5	18:25	18:46	7.31	16.30	8.99	147.05%	85.34%
1-RA-6	18:52	18:46	9.62	16.70	7.08	127.21%	77.40%
1-RA-7	19:19	19:40	7.93	16.70	8.77	124.11%	75.68%
1-RA-8	12:13	12:34	5.70	7.40	1.70	116.28%	68.50%
1-RA-9	12:42	13:03	5.84	7.40	1.56	109.14%	62.66%
		Averages	7.37	12.30	4.9238		
	Standa	Standard Devlation	1.91	4.53	4.0642		
á	Relati	ve Accuracy (by	ased on mean	Confidence Interval Relative Accuracy (based on mean of reference method)	3.12 109.14% 62.66%		
<u>.</u>	EPA Standard: RA must be <1	EPA Standard: RA must be <1	4 <10% of RM (	10% of RM or withn 5 ppmv-PS4a whichever is greater	2		COMPLIANCE STANDARD-PS48
				•			

שכיי ועון כיוווי ספר	וייים דור וייים ו	tron:				
1-RA-2	16:48	17:09	3.74	15.10	12.00	
1-0-2	12:12	12:42	4.72	no data	n.a.	
1-RA-4	17:54	18:15	3.82	15.90	13.25	

Testing by Cubix Corporation, Cameron Park, California

## TABLE 21 UNIT 2 NH3 CEMS RELATIVE ACCURACY

Date: Plant:	4/5-6/03 Kiewit High Desert	sert		Applicable Standards:	ij	12.71 ppm	for ppm @ 15% O2 Ilmit
Source: Technician(s): Cubix Method:	2 2 2 3 3 3	LF/CM/JJ/NS/JW/JC Bay Area ST-18	1S/JW/JC F-18	Number of Tests: t- value (97.5% confidence)	(idence)		2,306
			E	CEMS Data		Intermediate Values	alues
Test	Start	Stop	Cubix NH3	CEMSINES	Difference	RA of	RA of
Pun No.	Time	Time	(ppmv dry)	(ppmv, dry)	(sqs vmdd)	FW	applica bie standard
2-RA-1	13:57	14:18	1.77	6.10	4.33	244.42%	34.07%
2-RA-2	14:28	14:49	2.49	6.40	3.91	318.40%	53.40%
2-RA-3	15:02	15:23	2.54	6.50	3.96	204.47%	36.47%
2-HA-4	15:30	15:51	2.17	7.40	5.23	237.68%	41.94%
2-RA-5	15:58	16:19	2.83	6.50	3.67	211.01%	39.19%
2-RA-6	16:29	16:50	1.62	6.30	4.68	219.14%	38.59%
2-RA-7	16:58	17:19	1.85	6.10	4.25	218.94%	37.60%
2-RA-8	17:28	17:47	1.94	6.20	4.26	218.08%	36.94%
2-RA-9	17:59	18:20	1.49	6.90	5.41	234.11%	38.29%

<5 ppm diff	ppm @ O2 ilmit				
STANDARD-PS			whichever is greater		
COMPLIANCE			RA must be <10% of RM or withn 5 ppmv-PS4a	<10% of RM o	EPA Standard: RA must be
		38.29%	opm @ 15% 02 limit)	able standard-	Relative Accuracy (based on applicable standard-ppm @ 15% O2 limit)
		234.11%	(ccuracy (based on mean of reference method)	sed on mean	Relative Accuracy (ba
		0.46	Confidence Interval		
		0.5921	0.42	0.46	Standard Deviation
		4.4105	6.49	2.08	Averages

Testing by Cubix Corporation, Cameron Park, California

## TABLE 22 UNIT 3 UH3 CEMS RELATIVE ACCURACY

Date: Plant: Source:	4/5-6/03 Kiewit High Desert	ŧ		Applicable Standards:	in.	12.69 ppm	for ppm @ 15% O2 Ilmit
Technician(s): Cubix Method:		LF/CM/JJ/NS/JW/. Bay Area ST-1B	VS/JW/JC T-18	Number of Tests: t- value (97.5% confidence)	fidence)		2.306
			£	CEMS Data		Intermediate Values	Values
Test	Start	Stop	Cubix NH3	CEMS NH3	Difference	RA of	RA of
Run No.	Time	Time	(ppmv dry)	(ppmv, dry)	(ppmv abs)	Æ	applica ble standard
3-RA-1	16:59	17:20	1.96	11.60	9.64	491.14%	75.97%
3-RA-2	08:45	90:60	1.12	12.50	11.38	1401.02%	170.15%
3-RA-3	86:60	09:59	2.83	12.50	9.67	644.79%	100.17%
3-RA-4	10:20	10:41	3.49	13.10	9.61	487.57%	90.35%
3-RA-5	11:04	11:25	1.97	12.10	10,13	484.71%	86.90%
3-RA-6	11:40	12:01	1.83	8.40	6.57	507.42%	88.01%
3-RA-7	12:17	12:38	1.73	6.80	5.07	511.77%	86.03%
3-RA-8	14:39	15:00	1.57	10.70	9.13	514.77%	83.68%
3-RA-9	15:24	15:45	2.15	11.60	9.45	503.92%	82.32%

			COMPLIANCE	STANDARD-PS4a	Hip man y
					full CO man
1.48	503.92%	82.32%			
Confidence Interval	of reference method)	-ppm @ 15% O2 limit)	or within 5 ppmv-PS4a	whichever is greater	ı
	sed on mean	able standard	<10% of RM		
	Relative Accuracy (ba	Relative Accuracy (based on applica	EPA Standard: RA must be		
			Confidence Interval cy (based on mean of reference method) applicable standard-ppm @ 15% O2 limit)	1.48 503,92% 82.32%	Confidence Interval 1.48  icy (based on mean of reference method) 503.92%  applicable standard-ppm @ 15% O2 limit) 82.32%  ust be <10% of RM or withn 5 ppmv-PS4a  whichever is greater

Testing by Cubix Corporation, Cameron Park, California

## TABLE 22a UNIT 3 NH3 CEMS RELATIVE ACCURACY RETEST

Unit 3	Date: Plent:	4/30/03 Kiowit High Desert	ţ,		Applicable Standards:		12.69 ррт	for ppm @ 15% O2 limit
Start         Stop         Cubix NH3         CEMS NH3         Difference         RA of (ppmv abs)         PM           19:10         19:31         2.86         3.40         0.54         19.09%           19:10         19:31         2.86         3.40         0.54         19.09%           19:10         19:31         2.86         3.40         0.54         19.09%           18:08         18:08         3.00         -2.76         513.12%           13:48         14:09         4.82         3.10         -1.72         123.01%           14:34         14:55         3.30         0.35         64.08%         64.08%           15:10         15:31         2.95         3.30         0.35         64.08%         53.91%           15:42         16:03         2.47         3.50         1.03         53.91%         44.75%           16:27         16:27         16:48         2.98         3.30         -0.82         38.68%           17:33         17:54         4.05         3.30         -0.75         35.57%	Source: Fechnician(s): Subix Method:	Unit 3	LF/CM/JJ/NS Bay Area ST-	S/JW/JC -1B	Number of Tests: t- value (97.5% confi	idence)		2.306
Start         Stop         Cubix NH3         CEMS NH3         Difference         RA of           Time         Time         (ppmy dry)         (ppmy, dry)         (ppmy abs)         RM           19:10         19:31         2.86         3.40         0.54         19.09%           18:08         18:29         5.76         3.00         -2.76         513.12%           13:48         14:09         4.82         3.10         -1.72         123.01%           14:34         14:55         3.30         0.35         64.08%           15:10         15:31         2.95         3.30         0.35         64.08%           15:42         16:03         2.47         3.50         1.03         53.91%           16:27         16:27         16:48         2.98         3.30         -0.82         44.75%           17:33         17:54         4.05         -0.75         35.57%			L	FW	CEMS Data		Intermediate V.	ajues
Time         Time         (ppmv dry)         (ppmv, dry)         (ppmv, dry)         (ppmv abs)         FM           19:10         19:31         2.86         3.40         0.54         19:09%           18:08         18:29         5.76         3.00         -2.76         513.12%           13:48         14:09         4.82         3.10         -1.72         123.01%           14:34         14:55         3.30         0.35         64.08%           15:10         15:31         2.95         3.30         0.35         64.08%           15:42         16:03         2.47         3.50         1.03         53.91%           16:27         16:27         16:42         4.00         -0.82         38.68%           17:33         17:54         4.05         -0.75         35.57%	Test	Start	Stop	Cubix NH3	CEMSNHB	Difference	RA of	RA of
19:10         19:31         2.86         3.40         0.54         19.09%           18:08         18:08         5.76         3.00         -2.76         513.12%           13:48         14:09         4.82         3.10         -1.72         123.01%           14:34         14:55         3.30         0.35         64.08%           15:10         15:31         2.95         3.30         0.35         64.08%           15:42         16:03         2.47         3.50         1.03         53.91%           16:27         16:48         2.98         3.30         0.32         44.75%           16:57         17:18         4.62         4.00         -0.82         38.68%           17:33         17:54         4.05         3.30         -0.75         35.57%	Run No.	Time	Time	(ppmv dry)	(ppmv, dry)	(ppmv abs)	æ	applica ble standard
18:08         18:29         5.76         3.00         -2.76         513.12%           13:48         14:09         4.82         3.10         -1.72         123.01%           14:34         14:55         3.30         -0.10         81.41%           15:10         15:31         2.95         3.30         0.35         64.08%           15:42         16:03         2.47         3.50         1.03         53.91%           16:27         15:48         2.98         3.30         0.32         44.75%           16:57         17:18         4.62         4.00         -0.82         38.68%           17:33         17:54         4.05         3.30         -0.75         35.57%	3-RA-12a	19:10	19:31	2.86	3.40	0.54	19.09%	4.30%
13:48         14:09         4.82         3.10         -1.72         123.01%           14:34         14:55         3.30         3.20         -0.10         81.41%           15:10         15:31         2.95         3.30         0.35         64.08%           15:42         16:03         2.47         3.50         1.03         53.91%           16:27         16:48         2.98         3.30         0.32         44.75%           16:57         17:18         4.62         4.00         -0.62         38.68%           17:33         17:54         4.05         3.30         -0.75         35.57%	3-RA-10a	18:08	18:29	5.76	3.00	-2.76	513.12%	174.23%
14:34     14:55     3.30     3.20     -0.10     81.41%       15:10     15:31     2.95     3.30     0.35     64.08%       15:10     15:31     2.95     3.30     0.35     64.08%       16:27     16:48     2.98     3.30     0.32     44.75%       16:57     17:18     4.62     4.00     -0.62     38.68%       17:33     17:54     4.05     3.30     -0.75     35.57%	3-RA-3a	13:48	14:09	4.82	3.10	-1.72	123.01%	43.42%
15:10     15:31     2.95     3.30     0.35     64.08%       15:42     16:03     2.47     3.50     1.03     53.91%       16:27     16:48     2.98     3.30     0.32     44.75%       16:57     17:18     4.62     4.00     -0.62     38.68%       17:33     17:54     4.05     3.30     -0.75     35.57%	3-RA-4a	14:34	14:55	3.30	3.20	-0.10	81.41%	26.84%
15:42     16:03     2.47     3.50     1.03     53.91%       16:27     16:48     2.98     3.30     0.32     44.75%       16:57     17:18     4.62     4.00     -0.62     38.68%       17:33     17:54     4.05     3.30     -0.75     35.57%	3-RA-5a	15:10	15:31	2.95	3.30	0.35	64.08%	19.88%
16:27         16:48         2.98         3.30         0.32         44.75%           16:57         17:18         4.62         4.00         -0.62         38.68%           17:33         17:54         4.05         3.30         -0.75         35.57%	3-RA-6a	15:42	16:03	2.47	3.50	1.03	53.91%	15,69%
16:57     17:18     4.62     4.00     -0.62     38.68%       17:33     17:54     4.05     3.30     -0.75     35.57%	3-RA-7a	16:27	16:48	2.98	3.30	0.32	44.75%	12.67%
17:33 17:54 4.05 3.30 -0.75 35.57%	3-RA-8a	16:57	17:18	4.62	4.00	-0.62	38.68%	11.34%
	3-RA-9a	17:33	17:54	4.05	3.30	-0.75	35.57%	10.53%
				•	Confidence Interval	0.92		
Confidence Interval 0.92		Relativ	ve Accuracy (b	ased on mean	of reference method)	35,57%		
	Œ.	lative Accuracy (I EPA Standar	based on applird: RA must b	cable standard- e <10% of RM o	ppm @ 15% O2 limit) ir withn 5 ppmv-PS4a	10.53%		COMPLIANCE
(based on mean of reference method) 35.57% allcable standard-ppm @ 15% O2 limit) 10.53% be <10% of RM or withn 5 ppmv-PS4a		-			whichever is greater		4,	STANDARD-PS48
0.92 35.57% 10.53%							pom & OZ IImit	тир шад с>

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-9.98 -3.42 2.81

3.00 3.30 3.90

12.98 6.72 1.09

13:40 18:58 11:51

7hese runs not used for RA calculation
3-RA-2a 13:19
3-RA-11a 18:37
3-RA-1a 11:30

#### TABLE 23 UNIT 1 CEMS CYCLE TIME TEST RESULTS

Plant: Kiewit/Forney High Desert Location: Victorville, California

Technician: LF/CM/NS Source: Unit 1

	Low NOx	High NOx	02
Date:	4/7/03	4/7/03	4/7/03
Span Gas Concentration:	9.01 ppm	136.00 ppm	20.80 vol%
Zero Gas Concentration:	0 ppm	0 ppm	0 vol%
Analyzer Span:	10.00 ppm	150.00 ppm	20.90 vol%
Stack Initial Stable Reading:	3.55 ppm	2.90 ppm	13.90 vol%
Initial Stack Reading Change (% of Span)	1.0%	0.0%	0.0%
Zero Stable Reading:	0.10 ppm	0.20 ppm	0.00 vol%
Zero 2-Minute Change (% of Span):	0.0%	0.0%	0.0%
Start Time Stack injection:	14:32	14:32	14:15
Stack Upscale Stable Reading:	2.05	2.05	13.70
Upscale Step Change:	97.4%	97.3%	100.0%
Time of Upscale Stable Reading:	14:34	14:34	14:17
Upscale Response Time:	120 sec	120 sec	120 sec
Span Stable Reading:	9.20 ppm	141.90 ppm	20.70 vol%
Span 2-Minute Change (% of Span)	0.0%	0.0%	0.0%
Start Time Stack Injection:	14:46	14:15	14:31
Stack Downscale Stable Reading:	2.20 ppm	4.10 ppm	14.05 vol%
Downscale Step Change:	100.0%	100.0%	99.2%
Time of Downscale Stable Reading:	14:50	14:18	14:33
Downscale Response Time:	240 sec	180 sec	120 sec
Component Cycle Time:	240 sec	180 sec	120 sec
System Cycle Time:	240 sec		

#### TABLE 24 UNIT 2 CEMS CYCLE TIME TEST RESULTS

Plant: Kiewit/Forney High Desert Location: Victorville, California

Technician: LF/CM/NS Source: Unit 2

	Low NOx	High NOx	02
Date:	4/7/03	4/7/03	4/7/03
Span Gas Concentration:	9.03 ppm	135.00 ppm	20.80 vol%
Zero Gas Concentration:	0 ppm	0 ppm	0 vol%
Analyzer Span:	10.00 ppm	150.00 ppm	20.90 vol%
Stack Initial Stable Reading:	2.95 ppm	2.90 ppm	13.30 vol%
Initial Stack Reading Change (% of Span)	1.0%	0.0%	0.0%
Zero Stable Reading:	0.20 ppm	0.25 ppm	0.00 vol%
Zero 2-Minute Change (% of Span):	0.0%	0.1%	0.0%
Start Time Stack injection:	18:08	18:08	17:59
Stack Upscale Stable Reading:	2.70	2.70	13.30
Upscale Step Change:	100.0%	100.0%	100.0%
Time of Upscale Stable Reading:	18:10	18:10	18:01
Upscale Response Time:	120 sec	120 sec	120 sec
Span Stable Reading:	8.70 ppm	134.05 ppm	20.75 vol%
Span 2-Minute Change (% of Span)	0.0%	0.1%	0.5%
Start Time Stack injection:	18:17	17:59	18:08
Stack Downscale Stable Reading:	2.70 ppm	2.95 ppm	13.30 vol%
Downscale Step Change:	100.0%	100.0%	100.0%
Time of Downscale Stable Reading:	18:20	18:02	18:10
Downscale Response Time:	180 sec	120 sec	120 sec
Component Cycle Time:	180 sec	120 sec	120 sec
System Cycle Time:	180 sec		

#### TABLE 25 UNIT 3 CEMS CYCLE TIME TEST RESULTS

Plant: Kiewit/Forney High Desert Location: Victorville, California

Technician: LF/CM/NS Source: Unit 3

	Low NOx	High NOx	<b>Q2</b>
Date:	4/7/03	4/7/03	4/7/03
Span Gas Concentration:	9.02 ppm	135.00 ppm	20.80 vol%
Zero Gas Concentration:	0 ppm	0 ppm	0 vol%
Analyzer Span:	10.00 ppm	150.00 ppm	20.90 vol%
Stack Initial Stable Reading:	4.30 ppm	3.05 ppm	14.50 vol%
Initial Stack Reading Change (% of Span)	2.0%	0.1%	0.0%
Zero Stable Reading:	0.00 ppm	0.10 ppm	0.00 vol%
Zero 2-Minute Change (% of Span):	0.0%	0.0%	0.0%
Start Time Stack Injection:	19:34	19:34	19:24
Stack Upscale Stable Reading:	5.10	5.20	14.50
Upscale Step Change:	100.0%	100.0%	100.0%
Time of Upscale Stable Reading:	19:36	19:36	19:26
Upscale Response Time:	120 sec	120 sec	120 sec
Span Stable Reading:	9.45 ppm	135.20 ppm	21.00 vol%
Span 2-Minute Change (% of Span)	1,0%	0.1%	0.0%
Start Time Stack Injection:	19:45	19:24	19:33
Stack Downscale Stable Reading:	3.90 ppm	4.40 ppm	14.50 vol%
Downscale Step Change:	100.0%	100.1%	100.0%
Time of Downscale Stable Reading:	19:48	19:27	19:35
Downscale Response Time:	180 sec	180 sec	120 sec
Component Cycle Time:	180 sec	180 sec	120 sec
System Cycle Time:	180 sec		

Plant: Klewit/Fomey High Desert Location: Victorville, California Technician: LF/CM/NS

NOx Span: 10-EXEMPT O2 Span: 20.9 NOx Span: 150

Source: Unit t Date: 4/4/03 & 4/7/03 Time: 1426-1530 & 1258-1400

OZ CEMS									Average	Average		
	Cartified	Percent	Required	Calibration Gas	Tried 1	Trial 2	Trial 3	CENTS	Absolute	Percent of Span		i
	Value	of Span	% of Span	Status	Observed	Observed	Observed	Average	Difference	Difference	Requirement	Sistus
O2 low	6.03	28.9%	20-30	ਠ	8,00	6.00	6.00	6.00	0.03	0.5%	n %	ð
O2 mld	12.00	57.4%	20-80	ŏ	11.90	11.90	11.90	11.90	0.10	0.8%	5	ð
O2 high	20.80	99.5%	80-100	ð	20.80	20.70	20.70	20.73	0.07	0.3%	0.5 vol%	ð
MO <sub>X</sub> CEINS									Average	Average		
	Certified	Percent of Span	Required % of Span	Calibration Gas Status	Observed	Trial 2 Observed	Trial 3 Observed	CBNS	Absolute	Percent of Span	Requirement	Status
NOx low	44.3	29.5%	20-30	ð	44.9	45.5	48.2	45.53	-1.23	2.8%	25%	ਠੱ
NOK mkd	85.8	57.2%	20-90	ð	85.0	86.2	6.98	86.03	-0.23	0.3%	ŏ	ð
NOx high	138.0	90.7%	80-100	ŏ	140.4	141.4	142.3	141.37	-5.37	3.8%	5 000	ð

					,	
			•			
•						

Plant: Kiewit/Forney High Desert Location: Victor/ille, California Technician: LF/CM/NS

NOx Span: 10-EXEMPT O2 Span: 20.9 NOx Span: 150

Source: Unit 2 Date: 04/02/03

Time: 1202-1600

888 Requirement 5% or or 0.5 vel% Average Percent of Span Difference 1.1% 0.6% Absolute
Difference
0.06
0.07
0.20 CENES (Verego 5.97 11.90 20.60 Trial 3 Observed 6.00 11.90 20.50 Trial 2 Observed 6.00 11.90 20.60 Trial 1 Observed 5.90 11.90 20.60 Celibration Gas
Status
OK
OK
OK Required 20-30 50-60 80-100 of Span 28.9% 57.3% 99.5% Certified Value 6.03 11.97 20.80 O2 CEMS O2 low O2 mid O2 high

	i	!	i									
NOTCEMS						 			Average	Average		
	Certified	Percent	Required	Calibration Gas	Trial 1	Trial 2	That s	CENTS	Absolute	Percent of Span		<b>-</b>
	Value	of Span	% of Span	Status	Observed	Observed	Observed	Average	Difference	Difference	Requirement	Status
NOX PW	44.3	29.5%	20-30	ð	45.4	46.0	46.2	45.87	-1.57	3.5%	2%	ă
NOx mid	85.8	57.2%	50-60	š	88.4	89.8	0.68	88.73	-2.93	3.4%	5	ð
NOx heh	135,0	80.08	80-100	ŏ	137.5	137.6	137.8	137.63	-2.63	2.0%	5 ppm	ð

Plant: Kiewit/Forney High Desert Location: Victorville, California Technician: LF/CM/NS

NOx Span: 10-EXEMPT O2 Span: 20.9 NOx Span: 150

Source: Unit 3
Date: 04/03/03
Time: 100

1235

OZ CEMS									Average	Average		
	Certified	Percent of Span	Required % of Scen	Calibration Gas Status	Trial 1 Observed	Triel 2 Observed	Trial 3 Observed	CENTS.	Absolute	Percent of Span	Reculrement	Status
O2 low	6.03	26.9%	20-30	ð	8.00	6.00	6.00	6.00	0.03	0.5%	5%	ð
02 mid	11.97	57.3%	20-60	ð	12.00	12.00	12.00	12,00	-0.03	0.3%	ō	š
O2 high	20,80	289.5%	80-100	ð	20.90	20.90	20.90	20.30	-0.10	%5.0	0.5 vol%	ŏ
MOY CEMS									Average	Aversoe		
	Certified	Percent	Required	Calibration Gas	Trial 1	Triel 2	Trial 3	SHECO	Absolute	Percent of Span		
	Value	of Span	% of Span	Status	Observed	Observed	Observed	Average	Difference	Difference	Requirement	Status
NOx low	44.3	29.6%	20-30	ð	46.9	47.1	47.1	47.03	-2.73	6.2%	5%	ð
NOx mid	85.8	57.2%	50-60	ð	84.9	85.1	85.4	65.13	0.67	0.8%	8	ŏ
NOx high	136.0	86.7%	80-100	ð	133.8	134.4	134.5	134.23	1.77	1.3%	5 DDM	ð
								2		2		

Testing by Cubix Corporation, Cameron Park, California

#### TABLE 29 **UNIT 1: CEMS**

## 7-DAY DRIFT AND ERROR TEST SUMMARY Operator/Plant: Kiewit High Desert Low NOX Span: 10 Location: Victorville, CA High NOX Span: 150 Unit ID: Unit 1 02 Span: 21 High CO Span: 1000 Low CO Span: 10

150

21 1000

**OVERALL STATUS** 

PASS

					NH3 Span:	10		
v NOx Part 60	7-Day Calil	bration Drift Te			····			
	l .	Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date		(MMBTU/hr)	Value (ppm)		Value (ppm)	(ppm)	(%)	Statu
1-Apr	ZERO	n.a.	0,0	OK	0.0	0.0	0.0%	PAS
	SPAN	п.а.	9.0	OK	8.9	0.1	1.0%	PAS
2-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PAS
	SPAN	n.a.	9.0	OK -	9.1	0.1	1.0%	PAS
3-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	1.0%	PAS
•	SPAN	n.a.	9.0	OK.	9.0	0.0	0.0%	PAS
4-Apr	ZERO	n.a.	0.0	ОK	0.0	0.0	0.0%	PAS
	SPAN	n.a.	9.0	OK	8,9	0.1	1.0%	PAS
5-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	1.0%	PAS
	SPAN	n.a.	9.0	OK	9.0	0.0	0.0%	PAS
6-Apr	ZERO	п.а.	0.0	OK	0.1	0.1	1.0%	PAS
	SPAN	n.a.	9.0	OK	9.1	0.1	1.0%	PAS
	SPAN							
7-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	1.0%	PAS
7-Apr			0.0 9.0	OK OK	0.1 8.9	0.1 0.1	1.0% 1.0%	
	ZERO SPAN	ก.a. ก.a.	9.0			0.1		PAS
	ZERO SPAN	n.a.	9.0			0.1	1.0%	PAS PAS
	ZERO SPAN	ก.a. ก.a.	9.0		8.9	0.1	1.0%	PAS
	ZERO SPAN 0 7-Day Cal	n.a. n.a. bration Drift T	9.0 est Results	OK Reference	8.9	0.1 OVERA	1,0% LL STATUS	PAS
h NOx Part 6	ZERO SPAN	n.a. n.a. Ibration Drift T Firing Rate	9.0 est Results Reference	OK Reference	8.9 CEMS	0.1 OVERA	1.0% LL STATUS	PAS PAS Stat
h NOx Part 6	ZERO SPAN 0 7-Day Cal	n.a. n.a. Ibration Drift T Firing Rate (MMBTU/hr)	9.0 est Results Reference Value (ppm)	OK Reference Status	8.9 CEMS Value (ppm)	0.1 <b>GVERA</b> Difference (ppm)	1.0% LL STATUS % of Span (%)	PAS PAS Stat
h NOx Part 6	ZERO SPAN 0 7-Dey Cal	n.a. n.a. Ibration Drift T Firing Rate (MMBTU/hr) n.a.	9.0 est Results Reference Value (ppm) 0.0	OK Reference Status OK	CEMS Value (ppm) 0.0	0.1 OVERA Difference (ppm) 0.0	1.0% LL STATUS % of Span (%) 0.0%	PAS PAS Stat PAS PAS
h NOx Part 6 Date 1-Apr	ZERO SPAN 0 7-Day Cal ZERO SPAN	n.a. n.a. Ibration Drift T Firing Rate (MMBTU/hr) n.a. n.a.	9.0 est Results Reference Value (ppm) 0.0 135.0	Reference Status OK OK	6.9 CEMS Value (ppm) 0.0 135.0	O.1 OVERAL Difference (ppm) 0.0 0.0	1.0% LL STATUS % of Span (%) 0.0% 0.0%	State PAS PAS PAS PAS
h NOx Part 6 Date 1-Apr	ZERO SPAN 0 7-Dey Cal ZERO SPAN ZERO	n.a. n.a. Ibration Drift T Firing Rate (MMBTU/hr) n.a. n.a.	9.0 est Results Reference Value (ppm) 0.0 135.0 0.0	Reference Status OK OK OK	CEMS Value (ppm) 0.0 135.0 0.0	O.1 OVERAL Difference (ppm) 0.0 0.0 0.0	1.0% LL STATUS % of Span (%) 0.0% 0.0% 0.0%	State PAS PAS PAS PAS PAS
h NÖx Part 6  Date 1-Apr 2-Apr	ZERO SPAN 0 7-Day Cal ZERO SPAN ZERO SPAN	n.a. n.a. Ibration Drift T Firing Rate (MMBTU/hr) n.a. n.a. n.a.	9.0 est Results Reference Value (ppm) 0.0 135.0 0.0 135.0	Reference Status OK OK OK OK	CEMS Value (ppm) 0.0 135.0 0.0 135.6	0.1 OVERAL Difference (ppm) 0.0 0.0 0.0 0.6	1,0% LL STATUS % of Span (%) 0.0% 0.0% 0.0% 0.4%	PAS PAS Stat PAS PAS PAS PAS
h NÖx Part 6  Date 1-Apr 2-Apr	ZERO SPAN 0 7-Dey Cal ZERO SPAN ZERO SPAN ZERO	n.a. n.a. ibration Drift T Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a.	9.0 est Results Reference Value (ppm) 0.0 135.0 0.0 135.0 0.0	Reference Status OK OK OK OK OK	6.9 CEMS Value (ppm) 0.0 135.0 0.0 135.6 0.2	0.1 OVERAL Difference (ppm) 0.0 0.0 0.0 0.6 0.2	1.0% LL STATUS % of Span (%) 0.0% 0.0% 0.0% 0.4% 0.1%	PAS PAS Stat PAS PAS PAS PAS PAS
Date 1-Apr 2-Apr 3-Apr	ZERO SPAN 07-Day Cal ZERO SPAN ZERO SPAN ZERO SPAN	n.a. n.a. Ibration Drift T Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a.	9.0 est Results Reference Value (ppm) 0.0 135.0 0.0 135.0 0.0 135.0	Reference Status OK OK OK OK OK	CEMS Value (ppm) 0.0 135.0 0.0 135.6 0.2 133.3	0.1 OVERAL Difference (ppm) 0.0 0.0 0.0 0.6 0.2	1.0% LL STATUS % of Span (%) 0.0% 0.0% 0.4% 0.1% 1.1%	PAS PAS PAS PAS PAS PAS PAS PAS
Date 1-Apr 2-Apr 3-Apr	ZERO SPAN O 7-Day Cal ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a. n.a. Pration Drift T Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a.	9.0 est Results Reference Value (ppm) 0.0 135.0 0.0 135.0 0.0 135.0 0.0	Reference Status OK OK OK OK OK OK	CEMS Value (ppm) 0.0 135.0 0.0 135.6 0.2 133.3 0.0	0.1 OVERAL Difference (ppm) 0.0 0.0 0.0 0.6 0.2 1.7 0.0	1.0% LL STATUS % of Span (%) 0.0% 0.0% 0.4% 0.1% 1.1% 0.0%	PAS PAS PAS PAS PAS PAS PAS PAS PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr	ZERO SPAN 2 FRO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a. n.a. n.a.  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	9.0 est Results Reference Value (ppm) 0.0 135.0 0.0 135.0 0.0 135.0 0.0 135.0 0.0	Reference Status OK OK OK OK OK OK OK	CEMS Value (ppm) 0.0 135.0 0.0 135.6 0.2 133.3 0.0 133.1	0.1 OVERAL Difference (ppm) 0.0 0.0 0.0 0.6 0.2 1.7 0.0 1.9	1.0% LL STATUS % of Span (%) 0.0% 0.0% 0.4% 0.1% 1.1% 0.0% 1.3%	PAS PAS PAS PAS PAS PAS PAS PAS PAS PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr	ZERO SPAN  ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a. n.a. n.a.  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	9.0  est Results  Reference Value (ppm)  0.0  135.0  0.0  135.0  0.0  135.0  0.0  135.0  0.0  0.0	Reference Status OK OK OK OK OK OK OK	CEMS Value (ppm) 0.0 135.0 0.0 135.6 0.2 133.3 0.0 133.1	0.1 OVERAL Difference (ppm) 0.0 0.0 0.0 0.6 0.2 1.7 0.0 1.9 0.2	1.0% LL STATUS % of Span (%) 0.0% 0.0% 0.4% 0.1% 1.1% 0.0% 1.3% 0.1%	PAS PAS Stat PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr	ZERO SPAN  ZERO SPAN	n.a. n.a. n.a.  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	9.0  est Results  Reference Value (ppm)  0.0  135.0  0.0  135.0  0.0  135.0  0.0  135.0  0.0  135.0  0.0  135.0	Reference Status OK OK OK OK OK OK OK OK OK	CEMS Value (ppm) 0.0 135.0 0.0 135.6 0.2 133.3 0.0 133.1 0.2 136.3	0.1 OVERAL Difference (ppm) 0.0 0.0 0.0 0.6 0.2 1.7 0.0 1.9 0.2	1.0% LL STATUS % of Span (%) 0.0% 0.0% 0.4% 0.1% 1.1% 0.0% 1.19% 0.9%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr	ZERO SPAN 07-Day Cal ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a. n.a. n.a.  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	9.0  est Results  Reference Value (ppm)  0.0  135.0  0.0  135.0  0.0  135.0  0.0  135.0  0.0  135.0  0.0  135.0  0.0	Reference Status OK OK OK OK OK OK OK OK OK	6.9 CEMS Value (ppm) 0.0 135.0 0.0 135.6 0.2 133.3 0.0 133.1 0.2 136.3	0.1 OVERAL Difference (ppm) 0.0 0.0 0.0 0.6 0.2 1.7 0.0 1.9 0.2 1.3 0.2	1.0% L STATUS % of Span (%) 0.0% 0.0% 0.4% 0.1% 1.1% 0.0% 1.3% 0.1% 0.19% 0.19%	PAS

		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date		(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	Statu
1-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS
	SPAN	unknown	9.0	OK	8.9	0.1	1.0%	PAS
2-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS
	SPAN	unknown	9.0	OK	9,1	0.1	1.0%	PAS
3-Apr	ZERO	unknown	0.0	OK	0,1	0.1	1.0%	PAS
•	SPAN	unknown	9.0	OK	9.0	0.0	0.0%	PAS
4-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS
	SPAN	unknown	9.0	OK	8.9	0.1	1.0%	PAS
5-Apr	ZERO	unknown	0.0	ОК	0.1	0.1	1.0%	PAS
	SPAN	unknown	9.0	ОК	9.0	0.0	0.0%	PAS
6-Apr	ZERO	unknown	0.0	ОК	0.1	0.1	1.0%	PAS
	SPAN	unknown	9.0	OK	9.1	0.1	1.0%	PAS
7-Apr	ZERO	unknown	0.0	OK	0.1	0.1	1.0%	PAS
	SPAN	unknown	9.0	OK	8.9	0.1	1.0%	PAS

						OVERA	L STATUS	PASS
High NOx Part 7	75 7-Day Call	bration Error 1	est Results					
		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date		(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	Status
1-Apr	ZERO	unknown	0,0	OK	0.0	0.0	0.0%	PASS
	SPAN	unknown	135.0	OK	135.0	0.0	0.0%	PASS
2-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PASS
	SPAN	unknown	135.0	ОК	135.6	0.6	0.4%	PASS
3-Apr	ZERO	unknown	0.0	OK.	0.2	0.2	0.1%	PASS
1	SPAN	unknown	135.0	OK	133.3	1.7	1.1%	PASS
4-Apr	ZERO	unknown	0.0	ОК	0.0	0.0	0.0%	PASS
	SPAN	unknown	135.0	ОК	133.1	1.9	1.3%	PASS
5-Apr	ZERO	unknown	0.0	OK	0.2	0.2	0.1%	PASS.
,	SPAN	unknown	135.0	OK	136.3	1.3	0.9%	PASS
6-Apr	ZERO	unknown	0.0	OK	0.2	0.2	0.1%	PASS
· '	SPAN	unknown	135.0	ОК	138.3	3.3	2.2%	PASS
7-Apr	ZERQ	unknown	0.0	OK	0.2	0.2	0.1%	PASS
	SPAN	unknown	135.0	ОК	134.7	0.3	0.2%	PASS
						OVEDA	LISTATUS	PASS

#### TABLE 30 **UNIT 1: CEMS**

#### 7-DAY DRIFT AND ERROR TEST SUMMARY

Operator/Plant: Kiewit High Desert Location: Victorville, CA Unit ID: Unit 1

10 150

Low NOx Span: High NOx Span: O2 Span: High CO Span: Low CO Span: NH3 Span: 21 1000 10

					NH3 Span:	10		
2 Part 60/Part 7:	5 7-Day Cal	ibration Drift/E	rror Test Res	ults				
		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Dat <del>e</del>		(MMBTU/hr)	Value (vol%)	Status	Value (vol%)	(vol%)	(%)	Status
1-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	PASS
	SPAN	n.a.	20.9	OK	20.8	0.1	n.a.	PASS
2-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	PASS
	SPAN	n.a.	20.9	OK	21.0	0.1	n.a.	PASS
3-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	PASS
`	SPAN	n.a.	20.9	OK	20.9	0.0	n.a.	PASS
4-Apr	ZERO	n.a.	0.0	OK :	0.0	0.0	n.a.	PASS
	SPAN	n.a.	20.9	OK	20.9	0.0	n.a.	PASS
5-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	PASS
	SPAN	n.a.	20.9	OK	20.8	0,1	n.a.	PASS
6-Арг	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	PAS
• · · · · ·	SPAN	n.a.	20.9	OK	20.8	0.1	n.a.	PAS
7-Apr	ZERO	n.a.	0.0	ΟK	0.0	0.0	n.a.	PAS
1.230	SPAN	n.a.	20.9	OK	20.9	0.0	n.a.	PAS
	G. 7.4	11.4.	#U-0	<u> </u>	20.0	OVERA	L STATUS	PAS
igh CO Part 60 7	Z-Day Callb	retion Deift Te	+ Daeulto			CACION	LE GIATOS	r As.
gn CO Part 60 I	JULY CHILD			Calacana	OEMO	Difference	0/ af Cana	
D-*-		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	Plat
Date	7550	(MMBTU/hr)	Value (vol%)	Status	Value (vol%)	(voi%)	(%)	Statu
1-Apr	ZERO	n.a.	0 0	OK	-0.3	0.3	0.0%	PASS
	SPAN	n.a.	923	OK	909.0	14.0	1,4%	PAS
2-Apr	ZERO	n.a.	0	OK	-0,4	0.4	0.0%	PAS
_	SPAN	n.a.	923	OK	915.0	8.0	0.8%	PAS
3-Apr	ZERO	n.a.	0	OK	-0.3	0.3	0.0%	PAS
4	SPAN	n.a.	923	ΟK	947.3	24.3	2.4%	PAS
4-Apr	ZERO	n.a.	0	OK	-0.3	0.3	0.0%	PAS
	SPAN	n.a.	923	ОК	950.6	27.6	2.8%	PAS
5-Apr	ZERO	n.a.	0	OK	-0.3	0.3	0.0%	PAS
	SPAN	n.a.	923	OK	926.9	3.9	0.4%	PAS
6-Apr	ZERO	n.a,	0	OK	-0.3	0.3	0.0%	PAS
	SPAN	n.a.	923	OK	939.9	16.9	1.7%	PAS
7-Apr	ZERO	n.a.	] 0	OK	-0.3	0.3	0.0%	PAS
7-Apr		n.a. n.a.	0 923	OK OK	-0.3 925.4	2.4	0.2%	
	ZERO SPAN	n.a.	923			2.4		PAS:
7-Apr	ZERO SPAN	n.a.	923			2.4	0.2%	PAS
	ZERO SPAN	n.a.	923			2.4	0.2%	PAS
	ZERO SPAN	n.a. ration Drift Tes	923 I Results	OK	925.4	2.4 OVERA	0.2% LL STATUS % of Span (%)	PAS:
ow CO Part 80 7	ZERO SPAN	n.a. ration Drift Tea Firing Rate	923 Reference	OK Reference	925.4 CEMS	2.4 OVERA	0.2% LL STATUS % of Span (%)	PAS: PAS: Statu
ow CO Part 80 7	ZERO SPAN -Day Callb	n.a. ration Drift Tes Firing Rate (MMBTU/hr) n.a.	923 It Results Reference Value (ppm)	OK Reference Status	925.4 CEMS Value (ppm) 0.1	2.4 OVERA Difference (ppm)	0.2% LL STATUS % of Span	PAS: PAS: Statu
Date 1-Apr	ZERO SPAN -Day Callb ZERO	n.a. ration Drift Tes Firing Rate (MMBTU/hr) n.a. n.a.	923 It Results Reference Value (ppm) 0.0	OK Reference Status OK	925.4 CEMS Value (ppm) 0.1 9.2	2.4 OVERA Difference (ppm) 0.1	0.2% LL STATUS % of Span (%) 1.0%	PAS PAS Statu PAS PAS
ow CO Part 80 7	ZERO SPAN -Day Callb ZERO SPAN ZERO	n.a. ration Drift Tes Firing Rate (MMBTU/hr) n.a. n.a. n.a.	Results Reference Value (ppm) 9.2 0.0	OK Reference Status OK OK OK	925.4 CEMS Value (ppm) 0.1 9.2 0.0	Difference (ppm) 0.1 0.0 0.0	0.2% LL STATUS % of Span (%) 1.0% 0.0% 0.0%	PAS PAS Statu PAS PAS
Date 1-Apr 2-Apr	ZERO SPAN -Day Callb ZERO SPAN ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a.	923 Results Reference Value (ppm) 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK	925.4 CEMS Value (ppm) 0.1 9.2 0.0 9.1	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1	0.2% LL STATUS % of Span (%) 1.0% 0.0% 0.0% 1.0%	PAS PAS Statu PAS PAS PAS
ow CO Part 80 7 Date 1-Apr	ZERO SPAN  -Day Callb  ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a.	923 Results Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0	Reference Status OK OK OK OK	925.4 CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3	0.2% L STATUS % of Span (%) 1.0% 0.0% 0.0% 1.0% 3.0%	PAS PAS Statu PAS PAS PAS PAS
Date 1-Apr 2-Apr 3-Apr	ZERO SPAN  -Day Callb  ZERO SPAN ZERO SPAN ZERO SPAN	n.a.  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a.	923 Results Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2	0.2% L STATUS % of Span (%) 1.0% 0.0% 0.0% 1.0% 3.0% 2.0%	PAS PAS Statu PAS PAS PAS PAS PAS
Date 1-Apr 2-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference  Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0	Reference Status OK OK OK OK OK OK	925.4 CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 3.0% 2.0%	PAS PAS Statu PAS PAS PAS PAS PAS PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a. ration Drift Tes Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference  Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2	Reference Status OK OK OK OK OK OK OK	925.4 CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 9.3	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.2	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 3.0% 2.0% 2.0% 1.0%	PAS PAS Statu PAS PAS PAS PAS PAS PAS PAS PAS
Date 1-Apr 2-Apr 3-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a. ration Drift Tes Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923 Results Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0	Reference Status OK OK OK OK OK OK OK OK	925.4 CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.2	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 1.0%	PAS PAS Statu PAS PAS PAS PAS PAS PAS PAS PAS PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a.  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923 Results Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK OK OK OK OK OK	925.4  CEMS Value (ppm)  0.1  9.2  0.0  9.1  0.3  9.4  0.2  8.3  -0.1  9.2	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 1.0% 0.0%	PAS PAS Statu PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a.  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923 Results Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0	Reference Status OK OK OK OK OK OK OK OK OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 3.0% 2.0% 1.0% 1.0% 0.0%	PAS PAS Statu PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 8-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2	Reference Status OK OK OK OK OK OK OK OK OK OK OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.1	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 0.0% 1.0% 1.0% 1.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a. ration Drift Tes Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0	Reference Status OK OK OK OK OK OK OK OK OK OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 9.3 -0.1 9.2 0.0 9.3 0.2	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.1 0.1 0.0 0.0 0.0	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 2.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 8-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2	Reference Status OK OK OK OK OK OK OK OK OK OK OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 0.0% 1.0% 0.0% 1.0% 0.0%	PAS PAS PAS PAS PAS PAS PAS PAS PAS PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr)  n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.	923  Results  Reference Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0	Reference Status OK OK OK OK OK OK OK OK OK OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 9.3 -0.1 9.2 0.0 9.3 0.2	2.4 OVERAL Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 2.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a.  Firing Rate (MMBTU/hr)  n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.	923  Results  Reference Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2	Reference Status OK OK OK OK OK OK OK OK OK OK OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.0 0.0 0.1 0.0 0.0	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 0.0% 1.0% 0.0% 1.0% 0.0% 1.0% 0.0% 1.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Reference  Value (ppm)  0.0  9.2	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.0 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.0 0.1 0.2 0.0 0.0 0.1 0.2 0.0 0.0 0.1 0.2 0.0 0.0 0.1 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 1.0% 2.0% 1.0% 1.0% 0.0% 1.0% 5.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN ZERO S	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference  Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS Value (ppm)	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 United States (ppm)	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 1.0% 1.0% 0.0% 1.0% 0.0% 1.0% 2.0% 1.0% 1.0% 0.0% 1.0% 0.0% 1.0% 0.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 9.3 -0.1 9.2 0.0 9.3 0.2 9.2 Value (ppm)	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1	0.2% L STATUS  % of Span (%) 1.0% 0.0% 0.0% 1.0% 2.0% 1.0% 1.0% 0.0% 0.0% 5.0% 1.0% 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr	ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 9.3 -0.1 9.2 0.0 9.3 Value (ppm) 0.1 6.9	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.1	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 1.0% 1.0% 0.0% 1.0% 5.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN ZERO	n.a. retion Drift Tes Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 9.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS Value (ppm) 0.1 8.9 0.1	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.2 0.0 0.1 0.2 0.1 0.1 0.0 0.1 0.2 0.1 0.1 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.1 0.1 0.1 0.1	0.2% L STATUS  % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 1.0% 0.0% 1.0% 5.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr	ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Reference Value (ppm)  0.0 9.2	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS Value (ppm) 0.1 8.9 0.1 8.8	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.1 0.1 0.1 0.1 0.1 0.2	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 1.0% 2.0% 1.0% 0.0% 1.0% 2.0% 1.0% 1.0% 1.0% 2.0% 1.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr	ZERO SPAN ZERO	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Reference  Value (ppm)  0.0  9.2	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS Value (ppm) 0.1 8.9 0.1 8.8 0.1	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.1 0.1 0.2 0.1 0.1 0.2 0.1 0.1 0.2 0.1	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 1.0% 2.0% 1.0% 1.0% 2.0% 1.0% 1.0% 1.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 8-Apr 7-Apr Date 1-Apr 2-Apr 3-Apr	ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS (Value (ppm) 0.1 8.9 0.1 8.8 0.1 8.7	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.2% L STATUS  % of Span (%) 1.0% 0.0% 1.0% 2.0% 1.0% 1.0% 0.0% 1.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr Date 1-Apr 2-Apr	ZERO SPAN ZERO	n.a. ration Drift Tes Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 9.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS Value (ppm) 0.1 8.9 0.1 8.7 0.2	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 1.0% 1.0% 2.0% 1.0% 1.0% 1.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 2-Apr 3-Apr	ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS (Value (ppm) 0.1 8.9 0.1 8.8 0.1 8.7	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.2% L STATUS  % of Span (%) 1.0% 0.0% 1.0% 2.0% 1.0% 1.0% 0.0% 1.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 8-Apr 7-Apr Date 1-Apr 2-Apr 3-Apr	ZERO SPAN ZERO	n.a. ration Drift Tes Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 9.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS Value (ppm) 0.1 8.9 0.1 8.7 0.2	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 1.0% 1.0% 2.0% 1.0% 1.0% 1.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 2-Apr 3-Apr 4-Apr	ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 9.3 -0.1 9.2 0.0 9.3 Value (ppm) 0.1 8.8 0.1 8.8 0.1 8.7 0.2 8.8	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.2 0.1 0.1 0.2 0.1 0.1 0.2 0.1 0.1 0.2 0.1 0.1 0.2 0.1	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 2.0% 1.0% 1.0% 0.0% 1.0% 2.0% 1.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0%	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 2-Apr 3-Apr 4-Apr	ZERO SPAN ZERO	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Reference  Value (ppm)  0.0  9.2  0.0  9.0  0.0	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS Value (ppm) 0.1 8.9 0.1 8.8 0.1 8.7 0.2 8.6 0.1	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.1 0.2 0.1 0.1 0.2 0.1 0.1 0.2 0.1 0.1 0.1 0.1 0.2 0.1 0.1 0.1 0.2 0.1 0.1 0.1 0.2 0.1 0.1 0.2 0.1	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 1.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PAS
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 2-Apr 3-Apr 4-Apr 5-Apr	ZERO SPAN	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Reference  Value (ppm)  0.0  9.2  0.0  9.0  9	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS Value (ppm) 0.1 8.9 0.1 8.7 0.2 8.8 0.1 9.3	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.2 0.1 0.1 0.2 0.1 0.1 0.2 0.1 0.3 0.2 0.1 0.1 0.1 0.2 0.1 0.3 0.2 0.1 0.3 0.2 0.4 0.1 0.3	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 3.0% 1.0% 3.0% 1.0% 3.0% 1.0% 3.0%	PAS: PAS: PAS: PAS: PAS: PAS: PAS: PAS:
Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 2-Apr 3-Apr 4-Apr 5-Apr	ZERO SPAN ZERO	n.a.  ration Drift Tes  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	923  Results  Reference Value (ppm)  0.0  9.2  0.0  9.0  0.0  9.0  0.0  9.0  0.0  9.0  0.0  9.0  0.0	Reference Status OK	925.4  CEMS Value (ppm) 0.1 9.2 0.0 9.1 0.3 9.4 0.2 8.3 -0.1 9.2 0.0 9.3 0.2 9.2  CEMS (Value (ppm) 0.1 8.9 0.1 8.7 0.2 8.8 0.1 9.3 0.1 9.3 0.1	2.4 OVERA  Difference (ppm) 0.1 0.0 0.0 0.1 0.3 0.2 0.2 0.1 0.1 0.0 0.0 0.1 0.2 0.0 OVERA  Difference (ppm) 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.2% L STATUS % of Span (%) 1.0% 0.0% 1.0% 2.0% 1.0% 2.0% 1.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PAS: PAS: PAS: PAS: PAS: PAS: PAS: PAS:

OVERALL STATUS PASS

#### TABLE 31 **UNIT 2: CEMS**

			UNIT 2:	: CEMS				
	7-1	DAY DRIFT	CAND ER	ROR TE	ST SUMM	(ARY		
Operator/Plant	t: Kiewit High	Desert		Low	NOx Span:	10		
Location	: Victorville,	CA		High	NOx Span:	150	:	
Unit IC	: Unit 2			_	O2 Span:	21		
				Hig	h CO Span:	1000		
				l.o	w CO Span:	10		
					NH3 Span:	10		
Low NOx Part 6	0 7-Day Cali	bration Drift Te	st Results					
	-	Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date	_	(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	Status
1-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PASS
	SPAN	n.a.	9.0	OK	8.9	0.1	1.0%	PASS
2-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PASS
Ì	SPAN	п.а.	9.0	OK	9.0	0.0	0.0%	PASS
3-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PASS
ŀ	SPAN	п.а.	9,0	OK	8.9	0.1	1.0%	PASS
4-Apr	ZERO	п.а.	0.0	OK	0.0	0.0	0.0%	PASS
· '	SPAN	n.a.	9.0	OK	8.8	0.2	2.0%	PASS
5-Apr	ZERO	n.a.	0.0	ОК	0.1	0.1	1.0%	PA\$\$
i .	SPAN	п.а.	9,0	OK	8.9	0.1	1.0%	PASS
6-Apr	ZERO	п.а.	0.0	OK '	0.0	0.0	0.0%	PASS
,	SPAN	n.a.	9.0	ОК	9.1	0.1	1.0%	PASS
7-Apr	ZERO	n.a.	0.0	ОК	0.1	0.1	1.0%	PASS
	SPAN	n.a.	9.0	OK	8.8	0.2	2.0%	PASS
						OVERA	LL STATUS	PASS
High NOx Part	50 7-Day Cal	ibration Drift T	est Results					
			_	6 1				

						OVERA	LL STATUS	PA
NOx Part	60 7-Day Cal	ibration Drift T	est Results					
		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date		(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	Sta
1-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0,0%	PA
	SPAN	n.a. 🧸	135.0	OK ·	132.8	2.2	1.5%	PA
2-Apr	ZERO	п.а.	0.0	OK	0.0	0.0	0.0%	PA
	SPAN	n.a.	135.0	OK .	133.6	1.4	0.9%	PA
1qA-E	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PA:
	SPAN	n.a.	135.0	OK	135.0	0.0	0.0%	PA
4-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PA
	SPAN	n.a.	135.0	OK	133.3	1.7	1.1%	PA
5-Apr	ZERO	n.a.	0.0	OK	0.2	0.2	0.1%	PA
	SPAN	n.a.	135.0	OK	133.4	1.6	1.1%	PA
6-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PA
	SPAN	n.a.	135.0	OK	134.0	1.0	0.7%	PA
7-Apr	ZERO	n.a.	0.0	ОК	0.2	0.2	0.1%	PA
	SPAN	n.a.	135.0	ОК	133.8	1.2	0.8%	PA
				•		OVERA	L STATUS	PΑ

		Firing Rate	Reference	Reference	ÇEMŞ	Difference	% of Span	
Date		(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	State
1-Apr	ZERO	unknown	.0.0	ОК	0.0	0.0	0.0%	PAS
	SPAN	unknown	9.0	OK	8.9	0.1	1.0%	PAS
2-Apr	ZERO	นกหลอพก	0.0	ОК	0.0	0.0	0.0%	PAS
•	SPAN	unknown	9.0	OK	9.0	0.0	0.0%	PAS
3-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS
•	SPAN	unknown	9.0	OK	8.9	0.1	1.0%	PAS
4-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS
	SPAN	นกหภอพท	9.0	ОК	8.8	0.2	2.0%	PAS
5-Apr	ZERO	unknown	0.0	OK	0.1	0.1	1.0%	PAS
- •	SPAN	unknown	9.0	ОК	8.9	0.1	1.0%	PAS
6-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS
•	SPAN	unknown	9.0	OK	9.1	0.1	1.0%	PAS
7-Apr	ZERO	unknown	0.0	OK	0.1	0.1	1.0%	PAS
•	SPAN	unknown	9.0	OK	8.8	0.2	2.0%	PAS

						OVERA	LL STATUS	PAS
h NOx Part	75 7-Day Call	bration Error 1						
		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date		(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	Stat
1-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS
	SPAN	unknown	135.0	QK	132.8	2.2	1.5%	PAS
2-Apr	ZERO	unknown	0.0	ОК	0.0	0.0	0.0%	PAS
	SPAN	unknown	135.0	ок	133.6	1.4	0.9%	PAS
3-Apr	ZERO	unknown	0.0	ОК	0.0	0.0	0.0%	PA:
	SPAN	unknown	135.0	ОК	135.0	0.0	0.0%	PA
4-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PA
	SPAN	unknown	135.0	ОК	133.3	1.7	1,3%	PAS
5-Apr	ZERO	unknown	0.0	OK	0.2	0.2	0.1%	PAS
	SPAN	unknown	135.0	OK	133.4	1.6	1.1%	PAS
6-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS
• • •	SPAN	unknown	135.0	OK	134.0	1.0	0.7%	PA
7-Apr	ZERO	unknown	0.0	QΚ	0.2	0.2	0.1%	PA
	SPAN	unknown	135.0	OK	133.8	1.2	0.B%	PA
						OVERA	LL STATUS	PA

#### TABLE 32 **UNIT 2: CEMS**

#### 7-DAY DRIFT AND ERROR TEST SUMMARY

Operator/Plant: Kiewit High Desert Location: Victorville, CA Unit ID: Unit 2

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Low NOx Span: High NOx Span: O2 Span: High CO Span: Low CO Span: 150 21 1000

10

	<u> </u>	Firing Rate	Reference	Reference	CEMS	Difference	% of Span	_
Date	1	(MMBTU/hr)	Value (vol%)		Value (vol%)		(%)	SI
	ZERO							
1-Apr	1	n.a.	0.0	OK	0.0	0.0	n.a.	P
	SPAN	n.a.	20.9	OK	20.8	0.1	п.а.	₽
2-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	P.
	SPAN	n.a.	20.9	OK	20.9	0.0	n.a.	P
3-Apr	ZERO	n.a.	0.0	ОК	0.0	0.0	п.а.	P
	SPAN	n.a.	20.9	OK	20.9	0.0	n.a.	P
4-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	P
	SPAN	n.a.	20.9	ОК	20.8	0.1	n.a.	P
5-Apr	ZERO	n.a.	0.0	ОК	0.0	0.0	n,a.	P
	SPAN	n.a.	20.9	ок	20.8	0.1	п.а.	P
6-Арг	ZERO	n.a.	0.0	ÇK	0.0	0.0	n.a.	P
	SPAN	n.a.	20.9	OK	20.9	0.0	n.a.	P
7-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	P
	SPAN	n.a.	20.9	OK	21.0	0.1	n.a.	P
						OVERA	LL STATUS	P

ligh CO Part 6	0 7-Day Calib	ration Drift Te	st Results					
		Firing Rate	Reference	Referença	CEMS	Difference	% of Span	
Date		(MMBTU/hr)	Value (vol%)	Status	Value (vol%)	(vol%)	(%)	Status
1-Apr	ŽERO	n.a.	0	OK	-0.3	0.3	0.0%	PASS
	SPAN	n.a.	924	OK	906.8	17.2	1.7%	PASS
2-Apr	ZERO	n.a.	7 .Q	OK	-0.3	0.3	0.0%	PASS
	SPAN	л.а.	924	OK	928.3	4.3	0.4%	PASS
3-Apr	ZERO	л.а.	0	OK	-0.3	0.3	0.0%	PASS
•	SPAN	n.a.	924	OK	923.6	0.4	0.0%	PASS
4-Apr	ZERO	n.a.	0	OK	-0.3	0.3	0.0%	PASS
,	SPAN	л.а.	924	ок	896.7	27.3	2.7%	PASS
5-Apr	ZERO	n.a.	0	OK	-0.4	0.4	0.0%	PASS
	SPAN	n.a.	924	OK	956.4	32.4	3.2%	PASS
6-Apr	ZERO	n.a.	0	OK	-0.3	0.3	0.0%	PASS
•	SPAN	n.a.	924	OK	946.5	22.5	2.3%	PASS
7-Арг	ZERO	n.a.	0	OK	-0.4	0.4	0.0%	PASS
	SPAN	n.a.	924	OK	928.2	4.2	0.4%	PASS
***************************************						OVERA	PITATIE	PASS

			_			OVERA	T 2: VIO	PAGG
ow CO Pert 60	7-Day Callb	ration Drift Tes	t Results					
		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date		(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(mqq)	(%)	Status
1-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PASS
	SPAN	n.a.	9.2	OK	8.9	0.3	3.0%	PASS
2-Apr	ZERO	n.a.	0.0	OK	0.2	0.2	2.0%	PASS
·	SPAN	n.a.	9.2	OK	8.9	0.3	3.0%	PAS
З-Арг	ZERO	n.a.	0.0	OK	0.2	0.2	2.0%	PASS
•	SPAN	n.a.	9.2	OK	9.1	0.1	1.0%	PAS
4-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	1.0%	PAS
•	SPAN	n.a.	9.2	OK	9.0	0.2	2.0%	PAS
5-Apr	ZERO	n.a.	0.0	OK	-0.1	0.1	1.0%	PAS
	SPAN	n.a.	9.2	OK	9.2	0.0	0.0%	PAS
6-Apr	ZERO	n.a.	0.0	OK	-0.1	0.1	1.0%	PAS
•	SPAN	n.a.	9.2	OK	9.3	0.1	1.0%	PAS
7-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	1.0%	PAS
	SPAN	п.а.	9.2	OK	9.1	0.1	1.0%	PAS
						60/75/04		

		Firing Rate	Reference	Reference	CEMS	Difference	% of Span i	
Date		(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	St
1-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	1.0%	P.
·	SPAN	п.а.	9.0	OK	8.7	0.3	3.0%	PA
2-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PA
·	SPAN	n.a.	9,0	OK	8.5	0.5	5.0%	F
3-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	1.0%	P/
	SPAN	n.a.	9.0	OK	9.1	0.1	1.0%	PA
4-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	1.0%	P/
	SPAN	n.a.	9.0	ОК	9.1	0.1	1.0%	P
5-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	1.0%	PA
	SPAN	n.a.	9.0	OK	8.6	0.4	4.0%	P/
6-Apr	ZERO	n.a.	0.0	OK	-0.2	0.2	2.0%	PA
•	SPAN	n.a.	9.0	ОК	8.8	0.2	2.0%	P/
7-Apr	ZERO	ก.a.	0.0	OK	0.3	0.3	3.0%	P
-	SPAN	n.a.	9.0	OΚ	8.6	0.4	4.0%	P

#### TABLE 33 **UNIT 3: CEMS**

## 7-DAY DRIFT AND ERROR TEST SUMMARY Operator/Plant: Kiewit High Desert Low Nox Span: 10 Location: Victorville, CA High NOx Span: 150 Unit ID: Unit 3 02 Span: 21 High CO Span: 1000 Low CO Span: 10 NH3 Span: 10

					une chau:			
NOx Part 6	io 7-Day Cali	bration Drift Te	st Results					
Date		Firing Rate (MMBTU/hr)	Reference Value (ppm)	Reference Status	CEMS Vatue (ppm)	Difference (ppm)	% of Span (%)	Stati
1-Apr	ZERO	n.a.	0.0	ÖK	0.0	0.0	0.0%	PAS
	SPAN	n.a.	9.0	OK	9.1	0.1	1.0%	PAS
2-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	0.0%	PAS
•	SPAN	n.a.	9.0	ОK	9.0	0.0	0.0%	PAS
3-Apr	ZERO	n.a.	0.0	ОК	0.0	0.0	0.0%	PAS
	SPAN	n.a.	9.0	OK	9.0	0.0	0.0%	PAS
4-Apr	ZERO	n.a.	0.0	ОК	0.0	0.0	0.0%	PAS
-	SPAN	n.a.	9.0	ОК	9.0	0.0	0.0%	PAS
5-Apr	ŽERO	n.a.	0.0	OK	0.0	0.0	0.0%	PAS
•	SPAN	n.a.	9.0	QΚ	9.0	0.0	0.0%	PAS
6-Apr	ZERO	n.a.	0.0	QK	0.0	0.0	0.0%	PAS
•	SPAN	n.a.	9.0	ОК	9.1	0.1	1.0%	PAS
7-Apr	ZERO	n.a.	0.0	OK	-0.1	0.1	1.0%	PAS
	SPAN	n.a.	9.0	OK	9.0	0.0	0.0%	PAS
						OVERA	LL STATUS	PAS

						OVERA	FEBINIOS	PASS
h NOx Part	80 7-Day Cali	ibration Drift T	est Results					
		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date		(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	Statu
1-Apr	ZERO	п.а.	0.0	OK	0.1	0.1	0.1%	PAS
	SPAN	n.a.	135.0	OK	133.5	1.5	1.0%	PAS
2-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	0.1%	PAS
	SPAN	n.a.	135.0	OK	133.5	1.5	1.0%	PAŞ
3-Apr	ZERO	n.a.	0,0	OK	0.1	0.1	0.1%	PAS
· •	SPAN	· n.a.	135.0	OK	133.9	1.1	0.7%	PAS
4-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	0.1%	PAS
•	SPAN	n,a.	135.0	ОК	133.9	1.1	0.7%	PAS
5-Apr	ZERO	n.a.	0.0	OK	0.1	0.1	0.1%	PAS
•	SPAN	n.a.	135.0	OK	133.9	1.1	0.7%	PAS
6-Apr	ZERO	n.a.	0.0	ОК	0.1	0.1	0.1%	PAS
-	SPAN	n.a.	135.0	OK	134.5	0.5	0.3%	PAS
7-Apr	ZERO	n.a.	0.0	ОК	0.1	0.1	0.1%	PAS
•	SPAN	n.a.	135.0	ОК	134.3	0.7	0.5%	PAS
		-				OVERA	LL STATUS	PAS

		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date		(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	Statu
1-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS
	SPAN	unknown	9.0	OK	9.1	0.1	1.0%	PAS
2-Apr	ZERO	unknown	0.0	ОК	0.0	0.0	0.0%	PAS
	SPAN	unknown	9.0	ок	9.0	0.0	0.0%	PAS
3-Apr	ZERO	unknown	0.0	OK	0.0	0.0	0.0%	PAS-
-	SPAN	unknown	9.0	OK:	9.0	0.0	0.0%	PAS
4-Apr	ZERO	unknown	0.0	OΚ	0.0	0.0	0.0%	PAS
	SPAN	unknown	9.0	OΚ	9.0	0.0	0.0%	PAS
5-Apr	ZERO	unknown	0.0	Oκ	0.0	0.0	0.0%	PAS
	SPAN	unknown	9.0	OK	9.0	0.0	0.0%	PAS
0-Apr	ZERO	unknown	0.0	ОК	0.0	0.0	0.0%	PAS
•	SPAN	unknown	9.0	ОК	9.1	0.1	1.0%	PAS
7-Apr	ZERO	unknown	0.0	ОК	-0.1	0.1	1.0%	PAS
•	SPAN	unknown	9.0	OK	9.0	0.0	0.0%	PAS

						OVERA	LL STATUS	PAS
NOx Part	75 7-Day Cal	bration Error						
1		Firing Rate	Reference	Reference	CEMS	Difference	% of Span	
Date	_l	(MMBTU/hr)	Value (ppm)	Status	Value (ppm)	(ppm)	(%)	Stat
1-Apr	ZERO	unknown	0.0	OΚ	0.1	0.1	0.1%	PAS
	SPAN	นกหกอพก	135.0	ОК	133.5	1.5	1.0%	PAS
2-Apr	ZERO	นกโสสสหก	0.0	OK .	0.1	0.1	0.1%	PAS
	SPAN	นกหางพา	135.0	ОК	133.5	1.5	1.0%	PAS
3-Apr	ZERO	unknown	0.0	OK .	.0.1	0.1	0.1%	PAS
	SPAN	unknown	135.0	ОК	133.9	1.1	0.7%	PAS
4-Apr	ZERO	นกหัวเฉพา	0.0	OK	0.1	0.1	0.1%	PAS
•	SPAN	unknown	135.0	OK	133.9	1.1	0.7%	PAS
5-Apr	ZERO	unknown	0.0	OK	0.1	0.1	0.1%	PAS
•	SPAN	unknown	135.0	ОК	133.9	1.1	0.7%	PAS
6-Apr	ZERO	unknown	0.0	OK	0.1	0.1	0.1%	PAS
	SPAN	unknown	135.0	OK	134.5	0.5	0.3%	PAS
7-Apr	ZERO	unknown	0.0	OK	0.1	0.1	0.1%	PA
	SPAN	unknown	135.0	OK	134.3	0,7	0.5%	PA
							LL STATUS	PAS

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#### TABLE 34 **UNIT 3: CEMS**

#### 7-DAY DRIFT AND ERROR TEST SUMMARY

Operator/Plant: Kiewit High Desert Location: Victorville, CA Unit ID: Unit 3

150

Low NOx Span: High NOx Span: O2 Span: High CO Span: Low CO Span: 21 1000 10

					w CO Span:	10		
					NH3 Span:	10		
Part 60/Part 75	7-Day Cal		rror Test Res	ults				
		Firing Rate	Reference	Referençe	CEMS	Difference	% of Span	
Date		(MM8TU/hr)	Value (vol%)		Value (vol%)	(vol%)	(%)	Status
1-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	PASS
	SPAN	n.a.	20.9	CK	20.9	0.0	n.a.	PASS
2-Apr	ZERO	n.a.	0.0	ОК	0.0	0.0	n.a.	PASS
	SPAN	n.a.	20.9	OK	21.0	0.1	n.a.	PASS
3-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n.a.	PASS
i	SPAN	ก.a.	20.9	OK	21.0	0.1	D.8.	PASS
4-Apr	ZERO	ก.а.	0.0	OΚ	0.0	0.0	n.a.	PASS
	SPAN	n.a.	20.9	OK	21.0	0.1	n.a.	PASS
5-Apr	ZERO	ი.a.	0.0	OK	0.0	0.0	n.a.	PASS
* ' '	SPAN	n.a.	20.9	OK	21.0	0.1	n.a.	PASS
6-Apr	ZERO	n.a.	0.0	OK	0.0	0.0	n,a.	PASS
	SPAN	n.a.	20.9	QΚ	21.0	0.1	n.a.	PASS
7-Apr	ZERO	n.a.	0.0	OK .	0.0	0.0	n.a.	PASS
1-1-1-1	SPAN	n.a.	20.9	OK .	21.1	0.2	n.a.	PASS
	OI AII	74.44	44.0	<u> </u>	21.1		L STATUS	PASS
h CO Part 60 7	Dev Cellh	ration Orift To	et Requite			OVEIG	31X100	FAGO
II CO FAIT OUT	-Day Canb			Beforence	CELLE	Difference	W of Span	
Onto	- 1	Firing Rate	Reference	Reference	CEMS	Difference	% of Span	01-1
Date	7555	(MMBTU/hr)	Value (vol%)	Status	Value (vol%)	(vol%)	(%)	Status
1-Apr	ZERO	n.a.	0	OK	-0.6	0.6	0.1%	PASS
	SPAN	п.а.	933	OK	930.5	2.5	0.3%	PASS
2-Apr	ZERO	n.a.	7 0	OK	-0.6	0.6	0.1%	PASS
	SPAN	n.a.	933	OK	932.1	0.9	0.1%	PASS
3-Apr	ZERO	ก.a.	0	QK	-0.6	0.6	0.1%	PASS
	SPAN	л.а.	933	ок	928.8	4.4	0.4%	PASS
4-Apr	ZERO	n.a.	0	OK	-0.6	0.6	0.1%	PASS
, .	SPAN	n.a.	933	ОК	931.7	1.3	0.1%	PASS
5-Apr	ZERO	n.a.	0	OK	-0,6	0.6	0.1%	PASS
4.4.	SPAN	n.a.	933	ΟK	931.7	1.3	0.1%	PASS
6-Apr	ZERO	n.a.	👸	OK OK	-0.6	0.8	0.1%	PASS
		•	933	OK -	935.5	2.5	0.3%	PASS
A-1-1-1	LIAAGS			<u> </u>	#35.5	2.5	,	
·	SPAN	n.a.	•	OV.		i ne	( (19/	n v c c
7-Apr	ZERO	. ภ.ล.	0	OK	-0.6	0.8	0.1%	
·			•	OK OK	-0.6 932.8	0.2	0.0%	PASS
7-Apr	ZERO SPAN	n.a. n.a.	0 933			0.2		
7-Apr	ZERO SPAN	n.a. n.a. ration Drift Tea	933 t Results	OK	932.8	0.2 OVERA	0.0% LL STATUS	PASS
7-Apr w CO Part 60 7	ZERO SPAN	n.a. n.a. ration Drift Tea Firing Rate	933 t Results Reference	OK Reference	932.8 CEMS	0.2 OVERA	0.0% LL STATUS % of Span	PASS
7-Apr w CO Part 60 7	ZERO SPAN -Day Callb	n.a. n.a. ration Dritt Tea Firing Rate (MMBTU/hr)	933  t Results  Reference Value (ppm)	OK Reference Status	932.8 CEMS Value (ppm)	0.2 OVERA Difference (ppm)	0.0% LL STATUS % of Span (%)	PASS PASS Status
7-Apr w CO Part 60 7	ZERO SPAN -Day Callb. ZERO	n.a. n.a. ration Dritt Tea Firing Rate (MMBTU/hr) n.a.	933  t Results  Reference Value (ppm)  0.0	Reference Status OK	932.8 CEMS Value (ppm) 0.0	0.2 OVERA Difference (ppm) 0.0	0.0% LL STATUS % of Span (%) 0.0%	PASS PASS Status PASS
7-Apr v CO Part 60 7 Date 1-Apr	ZERO SPAN -Day Callb ZERO SPAN	n.a. n.a, ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a.	933  It Results  Reference Value (ppm)  0.0  9.2	Reference Status OK OK	932.8  CEMS Value (ppm)  0.0  9.2	0.2 OVERA Difference (ppm) 0.0 0.0	0.0% LL STATUS % of Span (%) 0.0% 0.0%	PASS PASS Status PASS PASS
7-Apr v CO Part 60 7	ZERO SPAN -Day Callb. ZERO SPAN ZERO	n.a. n.a, ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a.	933  Reference Value (ppm)  0.0  9.2  0.0	Reference Status OK OK OK	932.8  CEMS Value (ppm)  0.0  9.2  0.1	0.2 OVERA Difference (ppm) 0.0 0.0 0.1	0.0% LL STATUS % of Span (%) 0.0% 0.0% 1.0%	PASS PASS Status PASS PASS PASS
7-Apr  # CO Part 60 7  Date 1-Apr  2-Apr	ZERO SPAN -Day Callb. ZERO SPAN ZERO SPAN	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a.	0 933 Results Reference Value (ppm) 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK	932.8  CEMS Value (ppm)  0.0  9.2  0.1  9.2	0.2 OVERA Difference (ppm) 0.0 0.0 0.1 0.0	0.0% LL STATUS % of Span (%) 0.0% 0.0% 1.0% 0.0%	PASS PASS Status PASS PASS PASS
7-Apr v CO Part 60 7 Date 1-Apr	ZERO SPAN  -Day Callb.  ZERO SPAN ZERO SPAN ZERO	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a.	Results Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0	Reference Status OK OK OK OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0	0.2 OVERA Difference (ppm) 0.0 0.0 0.1 0.0 0.0	0.0% LL STATUS % of Span (%) 0.0% 0.0% 1.0% 0.0% 0.0%	PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr	ZERO SPAN  ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a. n.a.  ration Drift Tex  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a.	0 933 Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK OK OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0 9.2	0.2 OVERA Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.0	0.0% LL STATUS % of Span (%) 0.0% 1.0% 0.0% 0.0%	PASS PASS PASS PASS PASS PASS PASS
7-Apr  CO Part 60 7  Date 1-Apr  2-Apr	ZERO SPAN -Day Callb. ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a.	0 933 Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0	Reference Status OK OK OK OK OK OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0 9.2 0.0 9.2 0.0	0.2 OVERA Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0% LL STATUS % of Span (%) 0.0% 0.0% 1.0% 0.0% 0.0% 0.0% 2.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr VCO Part 60 7  Cate 1-Apr 2-Apr 3-Apr 4-Apr	ZERO SPAN  ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a. n.a.  ration Drift Tex  Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a.	0 933 Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK OK OK OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0 9.2 0.0 9.2 9.3	0.2 OVERA Difference (ppm) 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0% L STATUS % of Span (%) 0.0% 1.0% 0.0% 0.0% 0.0% 0.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  V CO Part 60 7  Date 1-Apr 2-Apr 3-Apr	ZERO SPAN  ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a.	0 933 Results Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0	Reference Status OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm)  0.0  9.2  0.1  9.2  0.0  9.2  0.2  9.3  0.1	0.2 OVERA Difference (ppm) 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	0.0% LL STATUS  % of Span (%) 0.0% 0.0% 1.0% 0.0% 0.0% 2.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  V CO Part 80 7  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a. n.a. ration Dritt Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	933  Reference Value (ppm)  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2	Reference Status OK OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0 9.2 0.0 9.2 9.3	0.2 OVERA Difference (ppm) 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0% L STATUS % of Span (%) 0.0% 0.0% 1.0% 0.0% 0.0% 2.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr VCO Part 60 7  Cate 1-Apr 2-Apr 3-Apr 4-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a. n.a. ration Drift Tax Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933 Reference Value (ppm): 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0	Reference Status OK OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm)  0.0  9.2  0.1  9.2  0.0  9.2  0.2  9.3  0.1	0.2 OVERA Difference (ppm) 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	0.0% LL STATUS % of Span (%) 0.0% 0.0% 0.0% 0.0% 2.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  CO Part 80 7  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN	n.a. n.a. n.a. Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933 Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm)  0.0  9.2  0.1  9.2  0.0  9.2  0.2  9.3  0.1  9.3	0.2 OVERA Difference (ppm) 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0% L STATUS % of Span (%) 0.0% 0.0% 1.0% 0.0% 0.0% 2.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  CO Part 80 7  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr	ZERO SPAN	n.a. n.a. Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933 Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0 9.2 0.2 9.3 0.1 9.3 0.1 9.3	0.2 OVERA Difference (ppm) 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	0.0% LL STATUS % of Span (%) 0.0% 0.0% 0.0% 0.0% 2.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  V CO Part 60 7  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr	ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO SPAN ZERO	n.a. n.a. Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933 Reference Value (ppm): 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0	Reference Status OK OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0 9.2 0.2 9.3 0.1 9.3 0.1	0.2 OVERA Difference (ppm) 0.0 0.1 0.0 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 0.0% 1.0% 0.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  V CO Part 60 7  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr	ZERO SPAN ZERO	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933 Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm) 0.0  9.2 0.1  9.2 0.0  9.2 0.2  9.3 0.1  9.3 0.1  9.3 0.1	0.2 OVERA Difference (ppm) 0.0 0.1 0.0 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 0.0% 1.0% 0.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  CO Part 60 7  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN	n.a. n.a. retion Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933 Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm) 0.0  9.2 0.1  9.2 0.0  9.2 0.2  9.3 0.1  9.3 0.1  9.3 0.1	0.2 OVERA Difference (ppm) 0.0 0.1 0.0 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 1.0% 0.0% 0.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  CO Part 60 7  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN	n.a. n.a. ration Drift Tex Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933 Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK OK OK OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm)  0.0  9.2  0.1  9.2  0.0  9.2  0.2  9.3  0.1  9.3  0.1  9.3  0.1  9.3	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 OVERA	0.0% L STATUS  % of Span (%) 0.0% 0.0% 0.0% 0.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN	n.a. n.a. Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	933  Reference Value (ppm)  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0	Reference Status OK OK OK OK OK OK OK OK OK OK OK OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 C.1 9.2	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% LL STATUS  % of Span (%) 0.0% 0.0% 1.0% 0.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933  Reference Value (ppm) 0.0 9.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 Value (ppm)	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% LL STATUS  % of Span (%) 0.0% 1.0% 0.0% 0.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr	ZERO SPAN	n.a. n.a. Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933  It Results  Reference Value (ppm) 0.0 9.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 Value (ppm)	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% LL STATUS  % of Span (%) 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr	ZERO SPAN	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933 Reference Value (ppm) 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2 0.0 9.2	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.0 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 Value (ppm) 0.1 8.9	0.2 OVERA  Difference (ppm) 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 0.0% 1.0% 0.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  CO Part 60 7  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr 7-Apr	ZERO SPAN ZERO	n.a. n.a. n.a. ration Drift Tex Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	0 933  It Results  Reference Value (ppm)  0.0 9.2	Reference Status OK	932.8  CEMS Value (ppm)  0.0  9.2  0.1  9.2  0.2  9.3  0.1  9.3  0.1  9.3  Value (ppm)  0.1  9.2	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0  OVERA  Difference (ppm) 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 1.0% 0.0% 2.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1.0% 1	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr	ZERO SPAN	n.a. n.a. ration Drift Tex Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm)  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2  0.0  9.2	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.2  CEMS Value (ppm) 0.1 8.9 0.1 9.0	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.0 OVERA  Difference (ppm) 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0% L STATUS % of Span (%) 0.0% 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr	ZERO SPAN ZERO	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm)  9.2 0.0	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 Value (ppm) 0.1 8.9 0.1 9.0 0.1	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.0  OVERA  Difference (ppm) 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% LL STATUS  % of Span (%) 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr 7-Apr Date 1-Apr 2-Apr 3-Apr	ZERO SPAN	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm)  0.0 9.2	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.0  OVERA  Difference (ppm) 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% LL STATUS  % of Span (%) 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr Date 1-Apr	ZERO SPAN ZERO	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm)  0.0 9.2 0.0 9.0 0.0	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.2  CEMS Value (ppm) 0.1 8.9 0.1 9.0 0.1 9.0 0.1	0.2 OVERA  Difference (ppm) 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 3-Apr	ZERO SPAN	n.a. n.a. ration Drift Tex Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm)  9.2 0.0 9.2	Reference Status OK	932.8  CEMS Value (ppm)  0.0  9.2  0.1  9.2  0.2  9.3  0.1  9.3  0.1  9.3  0.1  9.3  0.1  9.3  0.1  9.1  0.1  8.9  0.1  9.0  0.1  9.0  1.1  9.0  9.1  9.1	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.0 OVERA  Difference (ppm) 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	% of Span (%) 0.0% 0.0% 0.0% 0.0% 0.0% 1.0% 1.0% 1.0%	PAS: PAS: PAS: PAS: PAS: PAS: PAS: PAS:
7-Apr  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 3-Apr	ZERO SPAN ZERO	n.a. n.a. ration Drift Tea Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm)  9.2 0.0 9.0 0.0 9.0 0.0 9.0 0.0	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.2  CEMS Value (ppm) 0.1 8.9 0.1 9.0 0.1 9.0 0.1	0.2 OVERA  Difference (ppm) 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Oate 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 3-Apr 4-Apr	ZERO SPAN	n.a. n.a. ration Drift Tex Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm)  9.2 0.0 9.2	Reference Status OK	932.8  CEMS Value (ppm)  0.0  9.2  0.1  9.2  0.2  9.3  0.1  9.3  0.1  9.3  0.1  9.3  0.1  9.3  0.1  9.1  0.1  8.9  0.1  9.0  0.1  9.0  1.1  9.0  9.1  9.1	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.0 OVERA  Difference (ppm) 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	% of Span (%) 0.0% 0.0% 0.0% 0.0% 0.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 5-Apr	ZERO SPAN ZERO S	n.a. n.a. ration Drift Tex Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm)  9.2 0.0 9.0 0.0 9.0 0.0 9.0 0.0 9.0 0.0	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.1 0.1 9.0 0.1 9.1 0.2 9.1 0.1 9.0	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
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7-Apr  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr 2-Apr 3-Apr 4-Apr 5-Apr 5-Apr 6-Apr 5-Apr	ZERO SPAN ZERO S	n.a. n.a. ration Drift Tex Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm)  0.0 9.2 0.0 9.0 0.0 9.0 0.0 9.0 0.0 9.0 0.0 9.0 9	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.2  CEMS Value (ppm) 0.1 8.9 0.1 9.0 0.1 9.1 0.2 9.1 0.1 9.0 0.1 8.8	0.2 OVERA  Difference (ppm) 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS
7-Apr  Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 6-Apr 7-Apr Date 1-Apr 2-Apr 3-Apr 4-Apr 5-Apr 5-Apr	ZERO SPAN ZERO	n.a. n.a. n.a. Firing Rate (MMBTU/hr) n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	Reference Value (ppm) 0.0 9.2 0.0 9.0 0.0 9.0 0.0 9.0 0.0 9.0 0.0 9.0 0.0	Reference Status OK	932.8  CEMS Value (ppm) 0.0 9.2 0.1 9.2 0.2 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.3 0.1 9.1 0.1 8.9 0.1 8.9 0.1 9.1 0.2 9.1 0.1 9.0 0.1	0.2 OVERA  Difference (ppm) 0.0 0.0 0.1 0.0 0.0 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0% L STATUS  % of Span (%) 0.0% 1.0% 0.0% 1.0% 1.0% 1.0% 1.0% 1.0%	PASS PASS PASS PASS PASS PASS PASS PASS

### TEST REPORT ON ANNUAL COMPLIANCE AIR EMISSION TESTING

### OF THREE WESTINGHOUSE MODEL 501F COMBUSTION TURBINES WITH HEAT RECOVERY STEAM GENERATORS

#### AT THE HIGH DESERT POWER PROJECT LLC

PREPARED FOR CONSTELLATION ENERGY

CUBIX JOB NO. 8288

Report Revised 6/30/04

TEST DATES: APRIL 6-7, 2004 JUNE 4, 2004 VOC Re-sample

#### SUMMARY OF RESULTS

Exhaust gases from the exhaust stacks of three combined cycle combustion turbines were tested to determine the relative accuracy of the Continuous Emission Monitor System (CEMS) associated with each stack. This testing program was conducted for annual quality assurance as required by state and federal CEMS regulations. The results of the Relative Accuracy Test Audit (RATA) are presented in this report. Cubix Corporation of Cameron Park, California conducted this testing project April 6-7, 2004.

The testing program included testing the turbines at base load. The turbine exhaust stacks have a CEMS associated with them that monitors NOx, CO,  $O_2$ , and NH<sub>3</sub>, continuously. Twelve (12) test runs were conducted on each unit during which stack gas was analyzed for NOx, CO,  $O_2$ , and NH<sub>3</sub> concentrations, and these concentrations were compared to the CEMS values obtained for the same time period to determine the relative accuracy of the CEMS. To meet the requirements of Part 75, the concentrations of NOx and  $O_2$  were measured and used to tabulate NOx (lbs/MMBtu). The reference NOx emission rate (lbs/MMBtu) was compared with the CEMS measurement of NOx (lbs/MMBtu) during the same time period. The results of all RATA tests are briefly summarized in the following Part 75 and Part 60 Executive Summary tables.

Part 75: Executive Summary

Unit#	Requirement	Component	Specification	Result	Pass/Fail
1	RATA	NOx-diluent	Average difference must be within 0.015 lbs/MMBtu	0.001 lbs/MMBtu	*Pass
2	RATA	NOx-diluent	Average difference must be within 0.015 lbs/MMBtu	0.001 lbs/MMBtu	*Pass
3	RATA	NOx-diluent	Average difference must be within 0.015 lbs/MMBtu	0.000 lbs/MMBtu	*Pass

<sup>\*</sup> Meets the requirement for annual RATA testing

Part 60: Executive Summary

Unit#	Requirement	Component	Specification	Result	Pass/Fail
		NOx (ppm @15% O <sub>2</sub> )	≤20% of Mean Reference Method	12.6 %	Pass
1	RATA	CO (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	0.36 ppm	Pass
		O <sub>2</sub> (%)	≤ 1.0% absolute difference	0.10 %	Pass
		NH <sub>3</sub> (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	1.55 ppm	Pass
		NOx (ppm @15% O <sub>2</sub> )	≤ 20% of Mean Reference Method	19.1 %	Pass
2	RATA	CO (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	0.26 ppm	Pass
	MIII	O <sub>2</sub> (%)	≤ 1.0% absolute difference	0.14 %	Pass
		NH <sub>3</sub> (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	1.47 ppm	Pass
		NOx (ppm @15% O <sub>2</sub> )	≤ 20% of Mean Reference Method	6.0 %	Pass
3	RATA	CO (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	0.27 ppm	Pass
. ر	KAIA	O <sub>2</sub> (%)	≤ 1.0% absolute difference	0.03 %	Pass
		NH <sub>3</sub> (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	0.69 ppm	Pass

Tables 2, 3, and 4 provide the Part 75 (NOx-diluent), Part 60 (NOx, CO and O<sub>2</sub>), and Ammonia RATA results for the CEMS on Unit 1. Tables 5, 6, and 7 provide the RATA results for the CEMS on Unit 2. Tables 8, 9, and 10 provide the RATA results for the CEMS on Unit 3. These tables present the comparative RM (reference method) and CEMS data, the calculated RA acceptance criteria, and a test summary.

The data used to generate these tables are supported by the documents presented in the appendices of this report. Appendix A contains stack drawings, traverse point layouts of the stacks, and sampling data sheets Appendix B contains examples of all calculations necessary for the reduction of the data presented in this section of the report. Appendix C contains the QA/QC summaries for all RM tests. Appendix D contains the calibration documentation of the calibration gases and dry gas meters. Appendix E contains the strip charts records and data logs used to record the NOx, CO, and O<sub>2</sub> RATA tests. Appendix F contains the CEMS test data collected by the data acquisition and handling system (DAHS) during the RATAs.

## TEST REPORT ON ANNUAL COMPLIANCE AIR EMISSION TESTING

## OF THREE WESTINGHOUSE MODEL 501F COMBUSTION TURBINES WITH HEAT RECOVERY STEAM GENERATORS

AT THE
HIGH DESERT POWER PROJECT, LLC

PREPARED FOR CONSTELLATION ENERGY

CUBIX JOB NO. 45696

TEST DATES: MARCH 29-31, 2005

#### SUMMARY OF RESULTS

Annual Continuous Emission Monitoring System (CEMS) Relative Accuracy Test Audits (RATA) were conducted on continuous emission monitoring systems in service on three combined cycle turbines operating at the High Desert Power Project in Victorville, California. The purpose of these tests was to determine the Relative Accuracy of the CEMS associated with each source with regard to federal and Mojave Desert Air Quality Management regulations. Cubix Corporation of Austin, Texas conducted the Relative Accuracy Test Audit (RATA) testing March 29-31, 2005. The sampling event was conducted while the units were operating at rates prescribed in pertinent federal regulations.

#### **Test Matrix**

The Relative Accuracy Test Audit (RATA) test matrix for each source consisted of twelve valid test runs during which  $NO_x$ , CO and  $O_2$  concentrations were continuously monitored via instrumental analysis. Nine runs on each source were utilized to determine relative accuracy. The tests were conducted in conjunction with annual compliance tests prescribed by the MDAQMD permit. These results are presented in a separate document. As such, certain gaseous test runs on each source were 60-minutes in length; all other runs were 21-minutes in length. Each  $NH_3$  test run was 30-minutes in length as mandated by the published method. For each test run, CEMS measurements were compared with the reference method (RM) measurements.

#### Summary of Test Results

Tables 2 and 3 are executive summaries of all tests, with Table 2 presenting 40CFR75 results and Table 3 40CFR60 results. Tables 4-12 present (in chronological order) the detailed results of all tests conducted on each source to complete the sampling program. These tables present the comparative RM (reference method) and CEMS data, the calculated relative accuracy (RA), acceptance criteria and a test summary.

These sources are subject to  $40\underline{CFR}75$ . The NO<sub>x</sub> RATA requirements for Part 75 are that the RA be less than 10% of the RM (concentration monitor) or that the difference between CEMS and RM measurements be less than 0.02 lbs/MMBTU (NO<sub>x</sub>/diluent rate monitor) if the 10% relative accuracy

requirement is not achieved. To be allowed to conduct future RATA tests on an annual basis, Part 75 requires that the RA be less than 7.5% of the RM, or +/- 0.015 lbs/MMBtu. Each component analyzer meets or exceeds these latter criteria.

Each source is also subject to 40<u>CFR</u>60 and criteria presented in the MDAQMD permit. For each component analyzer or calculated mass emission determined from concentrations recorded by that analyzer, relative accuracy may be determined in terms of percent or absolute difference between the reference method results and those recorded by the CEMS, or in terms of an applicable standard established by the permit. The latter criteria may only be utilized if the value of the measured component is less than 50% of the established standard. The criterion for NOx analyzers is a RA of ≤ 20% of Mean Reference Method (PS2); for O2 analyzers 1% by volume (PS3); and for CO analyzers 5 ppm absolute (PS4A). The RA of the NH3 analyzer is also determined using PS4A as discussed in the CEMS monitoring plan.

#### **Document Organization**

The data used to generate the tables found in this section are supported by the documents presented in the appendices of this report. Appendix A contains a stack drawing, traverse point layout, and other field data sheets. Examples of the calculations necessary for the reduction of the data presented in this section of the report are shown in Appendix B. Appendix C gives the QA/QC summaries for all RM tests. Appendix D contains the calibration certifications for the equipment and calibration gases used during the sampling event. The logged data records used to record the NOx, CO and O<sub>2</sub> test runs are presented in Appendix E; data was also recorded on strip charts, which serve as the permanent record of the tests and are kept on file at Cubix's Austin, Texas office. The CEMS data as recorded in the control room by the source's Data Acquisition and Handling (DAHS) system during each test run is provided in Appendix F. Appendix G contains field data sheets used for the collection of and results of analyses of NH<sub>3</sub>.

Table 2
Part 75: Executive Summary

Unit #	Requirement	Component	Specification	Result	Pass/Fail
CT1	RATA	NOx-diluent	Average difference must be within 0.015 ibs/MMBtu	0.001 lbs/MMBtu	*Pass
CT2	RATA	NOx-diluent	Average difference must be within 0.015 lbs/MMBtu	0.002 lbs/MMBtu	*Pass
СТЗ	RATA	NOx-diluent	Average difference must be within 0.015 lbs/MMBtu	0.001 lbs/MMBtu	*Pass

<sup>\*</sup> Meets the requirement for annual RATA testing



#### ANNUAL COMPLIANCE AIR EMISSION TESTS

## OF THREE WESTINGHOUSE MODEL 501F COMBUSTION TURBINES WITH HEAT RECOVERY STEAM GENERATORS

IN SERVICE AT THE
HIGH DESERT POWER PROJECT, LLC
VICTORVILLE, CALIFORNIA

PREPARED FOR
HIGH DESERT POWER PROJECT, LLC
CONSTELLATION ENERGY

TRC-CUBIX PROJECT NUMBER 51471

<u>TEST DATES:</u> MARCH 21-23, 2006

#### SUMMARY OF RESULTS

Annual Continuous Emission Monitoring System (CEMS) Relative Accuracy Test Audits (RATA) were conducted on continuous emission monitoring systems in service on three combined cycle turbines operating at the High Desert Power Project in Victorville, California. The purpose of these tests was to determine the Relative Accuracy of the CEMS associated with each source with regard to federal and Mojave Desert Air Quality Management regulations. TRC-Cubix of Austin, Texas and Bakersfield, California conducted the Relative Accuracy Test Audit (RATA) testing March 21-23, 2006. The sampling event was conducted while the units were operating at rates prescribed in pertinent federal regulations.

#### **Test Matrix**

The Relative Accuracy Test Audit (RATA) test matrix for each source consisted of nine valid test runs during which NO<sub>x</sub>, CO and O<sub>2</sub> concentrations were continuously monitored via instrumental analysis. The tests were conducted in conjunction with annual compliance tests prescribed by the MDAQMD permit. These results are presented in a separate document. As such, certain gaseous test runs on each source were 60-minutes in length; all other runs were 21-minutes in length. Each NH<sub>3</sub> test run was 30-minutes in length as mandated by the published method. For each test run, CEMS measurements were compared with the reference method (RM) measurements.

#### Summary of Test Results

Tables 2 and 3 are executive summaries of all tests, with Table 2 presenting 40<u>CFR</u>75 results and Table 3 40<u>CFR</u>60 results. Tables 4-12 present (in chronological order) the detailed results of all tests conducted on each source to complete the sampling program. These tables present the comparative RM (reference method) and CEMS data, the calculated relative accuracy (RA), acceptance criteria and a test summary.

These sources are subject to  $40\underline{CFR}75$ . The NO<sub>x</sub> RATA requirements for Part 75 are that the RA be less than 10% of the RM (concentration monitor) or that the difference between CEMS and RM measurements be less than 0.02 lbs/MMBTU (NO<sub>x</sub>/diluent rate monitor) if the 10% relative accuracy requirement is not achieved. To be allowed to conduct future RATA tests on an annual basis, Part 75 requires that the RA be less than 7.5% of the RM, or +/- 0.015 lbs/MMBtu. Each component analyzer meets or exceeds these latter criteria.

Each source is also subject to  $40\underline{CFR}60$  and criteria presented in the MDAQMD permit. For each component analyzer or calculated mass emission determined from concentrations recorded by that analyzer, relative accuracy may be determined in terms of percent or absolute difference between the reference method results and those recorded by the CEMS, or in terms of an applicable standard established by the permit. The latter criteria may only be utilized if the value of the measured component is less than 50% of the established standard. The criterion for NOx analyzers is a RA of  $\leq$  20% of Mean Reference Method (PS2); for O2 analyzers 1% by volume (PS3); and for CO analyzers 5 ppm absolute (PS4A). The RA of the NH3 analyzer is also determined using PS4A as discussed in the CEMS monitoring plan.

#### **Document Organization**

The data used to generate the tables found in this section are supported by the documents presented in the appendices of this report. Appendix A contains a stack drawing, traverse point layout, and other field data sheets. Examples of the calculations necessary for the reduction of the data presented in this section of the report are shown in Appendix B. Appendix C gives the QA/QC summaries for all RM tests. Appendix D contains the calibration certifications for the equipment and calibration gases used during the sampling event. The logged data records used to record the NOx, CO and O<sub>2</sub> test runs are presented in Appendix E; data was also recorded on strip charts, which serve as the permanent record of the tests and are kept on file at TRC-Cubix's Austin, Texas office. The CEMS data as recorded in the control room by the source's Data Acquisition and Handling (DAHS) system during each test run is provided in Appendix F. Appendix G contains field data sheets used for the collection of and results of analyses of NH<sub>3</sub>.

Table 2
Part 75: Executive Summary

Unit#	Requirement	Component	Specification	Result	Pass/Fail
3F1	RATA	NOx-diluent	Average difference must be within 0.015 lbs/MMBtu	0.001 lbs/MMBtu	*Pass
3F2	RATA	NOx-diluent	Average difference must be within 0.015 lbs/MMBtu	0.001 lbs/MMBtu	*Pass
3F3	RATA	NOx-diluent	Average difference must be within 0.015 lbs/MMBtu	0.001 lbs/MMBtu	*Pass

<sup>\*</sup> Meets the requirement for annual RATA testing

Table 3
Part 60: Executive Summary

Unit#	Requirement	Component	Specification	Result	Pass/Fail
3F1	RATA	NOx (ppm @15% O <sub>2</sub> )	≤ 20% of Mean Reference Method	11.6%	Pass
		CO (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	0.08 ppm	Pass
		O <sub>2</sub> (%)	≤ 1.0% absolute difference	0.62%	Pass
		NH <sub>3</sub> (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	1.19 ppm	Pass
3F2	RATA	NOx (ppm @15% O <sub>2</sub> )	≤20% of Mean Reference Method	11.4%	Pass
		CO (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	0.08ppm	Pass
		O <sub>2</sub> (%)	≤ 1.0% absolute difference	0.13%	Pass
		NH <sub>3</sub> (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	1.28 ppm	Pass
3F3	RATA	NOx (ppm @15% O <sub>2</sub> )	≤ 20% of Mean Reference Method	7.0%	Pass
		CO (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	0.08 ppm	Pass
		O <sub>2</sub> (%)	≤ 1.0% absolute difference	0.09 %	Pass
		NH <sub>3</sub> (ppm @15% O <sub>2</sub> )	≤ 5ppm absolute average difference plus confidence coefficient	0.81 <b>pp</b> m	Pass